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ABSTRACT

The proceedings of the eighth annual meeting of the College Reading Association consisted of the following papers: "President's Report" (M. J. Weiss); "What Constitutes a Minimal Program for Clinical Diagnosis of Reading Disabilities?" (G. L. Bond); "Problems in Establishing Developmental Reading Programs in Junior Colleges" (E. S. Johnson); "Description of a Reading Program for Pre-College Students in a High School" (M. B. Warren); "My Experiences with a Successful High School Developmental Reading Program" (S. C. Berkey); "Experiences with a Successful High School Developmental Reading Program" (E. Sargent); "Developing Better Readers of the Better Newspapers" (C. Sailer); "Physiological and Psychological Events: Their Relationship" (D. E. P. Smith); "Reading Improvement and Achievement in College" (E. S. Wright); "Reading Improvement and Achievement in College" (L. W. Joll); "The Status of Reading Improvement Programs in Industry" (H. O. Patterson); "Moving in the Right Direction" (D. W. Henderson); "Reading Flexibility as Related to Levels of Reading Complexity" (D. R. Stone); "Teaching Flexible Reading Skills in High School" (H. Huff); "Establishing a New Reading Improvement Program for College Students" (P. Shaw); "Whose Job Is It to Teach Reading?" (R. S. Kimball); "The Role of the Private Clinic in the Community" (F. B. DeWitt); "The Role of the Coordinator in the Secondary Reading Program" (H. H. Herber); "New York State Education Department's Experimental Reading Material: A Progress Report" (E. Morgan); "Perceptual Difficulties Associated with Reading Disability" (F. Silbiger and D. Woolf); "Servicing the Special Needs of a Great Metropolitan School System" (S. M. Cohn); "An Experiment in the Improvement of College Reading and Study Skills" (E. O. Wendel); "Tutorial Programs within the Framework of Existing College Facilities" (W. Pauk); "Predisposing Factors Association with Poor Reading in High School and College" (A. S. McDonald); "State Certification of Reading Specialists--Or What?" (J. B. Wolfe); "Paperbacks--Good Reading in Small Packages" (D. A. Sohn); "Reaching Outward with Paperbound Books" (F. McLaughlin); and "Reading and Creativity" (A. T. Burrows). (MS)

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by

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Lafayette College

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COLLEGE READING ASSOCIATION

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PREFACE

The College Reading Association held its eighth annual meeting at Rochester Institute of Technology, Rochester, N. Y. on April 9-10, 1965. At a business meeting, the following were announced to serve as officers for the coming year

Robert C. Aukerman	President
Leonard S. Braam	President-elect

Ninth Annual Meeting

College Reading Association

April 1-2, 1966

Jersey City State College

Jersey City, New Jersey

PRESIDENT'S ADDRESS

M. Jerry Weiss
Jersey City State College

This 1964-1965 year of history might very well be looked upon as the year we attempted to put humanity for real people back into reading. For this was the year of two major events – the extension of the NDEA to provide for reading and the War on Poverty bill. These seemed to me to be such major events which would cause teachers of reading to evaluate their materials and their methods as to their relative effectiveness for the many kinds of people in their classes.

This is not a new milestone in CRA history, for this organization has long been a leader in reporting latest developments and research activities in clinical, industrial, and educational reading programs. We have recognized in all of our convention programs and in our publications the many diversified programs going on throughout the United States and elsewhere. Yes, we as an organization literaily strive to provide for individual differences, a challenge which many teachers have yet to live up to. As we become more people conscious, we may give up our battle ribbons earned in the latest attacks on such "brash" innovations as I.T.A., Words in Color, Carden System, Joplin Plan, individualized reading, grouping, etc. – all of which shake us in our secure traditional world. For it is time that we really accept the notion that teachers who are really concerned with doing an effective job must be familiar with a wide range of techniques and materials if we are going to work with the many mobile, space-oriented children attending our schools, clinics, and colleges today.

This conference each year has crossed disciplines, bringing together many different fields of study in a search for better ways to teach reading. No one academic or professional field can overlook its obligations to contribute to the growing volumes on reading research and reading instruction.

But the questions which really need answering are many:

1. Who reads this body of literature? What do they do about it?

2. After attending special courses and institutes, what? Will the programs in schools really be any different?

3. Will the N.D.E.A. institute programs be of such a nature as to provide adequate experiences needed to change the attitudes and techniques of teachers?

4. Will the tutorial services in the community action programs, organized under the Office of Economic Opportunity Act, bring such significant changes in our disadvantaged areas as to drive our teachers to more meaningful activities for children from such areas?

5. What have we learned about high school and college drop-outs

that relates to reading instruction? What then are we going to do about this in our classes?

These are just a few problems. Time limits me, but I need a few minutes to re-emphasize some points too many of us have simply overlooked.

(1) What about the tremendous lag in applying what we have already learned from research?

For example — the implications and recommendations found in **The Torchlighters** and **The First R.** by Austin and Morrison.

For example — the interest studies of children and youth reported on by Norvell and Burton.

For example — the attitudinal and literacy studies cited in **Reading for Life** and **The American Reading Public.**

(2) What about the developments in psychology and related fields offering information on newer theories of learning, concepts of perception, dynamic theories of vision, and the significant studies on creativity?

(3) What about the impact of mass media, such as television, films, paperbacks?

(4) What about tests and standards? Who sets them? Are they real? What other evaluative techniques are valid?

Yes, we can go on, year after year, convention after convention, speaker after speaker; but then what? What happens back home? Has anyone listened with depth? In Anthony Newly's **The Roar of the Greasepaint — the Small of the Crowd,** there is a song which could well describe modern man. It's entitled "Who Can I Turn To?" This might be a student — this vintage who'll be around in the year 2015. Are we really doing anything in our three-explosion world — nuclear, population, and knowledge — to prepare him for his times, his problems? Will reading for him ever be purposeful, pleasurable for a lifetime?

Let's not stop here on our journey forward. Let's not be so blinded by the new found funds to think that this money alone will do miracles for reading instruction. It never has and never will.

Instead, let us leave here mindful that each of us has a responsibility not to be so concerned just with methods and materials that we have no basic philosophy that is practical for each of us. Such a philosophy will reflect a faith in ourselves and in our ideas through which we will gain a greater sense of confidence in being willing to try out new activities in our classes and clinics. Our successes will continue to be our encouragement. Our problems will be our challenges.

Let us not overlook the basic truth that teachers and students are individuals, act as individuals, and teach and learn as individuals. No manual or machine alone can ever be as effective as the rapport based on a person to person relationship in a people-who-need-people-world.

As we continue to study the thinking-learning-creative processes, we should be more deeply concerned with learning much more about what impact, if any, does reading make upon the reader. Isn't this goal for all of us gathered here? Won't this help explain the real "Why" of reading.

And in conclusion, let us leave this Eighth College Reading Association Convention convinced of a greater need to evaluate ourselves and our efforts and really do something about the results. We need to be mindful of our sacred role in life — as teachers — all of us "Littlechaps" in a terribly complex world even Anthony Newly couldn't stop so we could get off. Instead let us find inspiration for this new year in his lyric which reminds each of us teachers that this is our once in lifetime moment when we're going to do great things.

WHAT CONSTITUTES A MINIMAL PROGRAM FOR CLINICAL DIAGNOSIS OF READING DISABILITIES?

Guy L. Bond
University of Minnesota

As a result of the college's general testing program, it is often possible to select those students who are in need of clinical diagnosis of their reading difficulties. The reading clinic should concern itself with the relatively small number of severely retarded cases, since diagnostic and remedial work is comparatively expensive, and the returns must justify the expense. It is the severely impaired reading case that is most in need of the clinical diagnosis. And it is the severely retarded case who will profit most from remedial instruction.

Purpose of Diagnosis

After the cases to be given remedial work have been selected, it is necessary to make a thorough diagnosis of each case. Diagnosis consists of measuring and studying the symptoms and determining the causes in order to understand the nature of the disability. The nature of the disability must be understood if appropriate remedial instruction is to be applied. The adequacy of the diagnosis determines in no small degree the success of the remedial program. Since reading is a complex process, there is no one single or simple cure for reading disability. The remedial training that will be effective for one case might prove detrimental or wasteful for another. It is only through an understanding of the underlying factors of disability of any given case that an adequate remedial program can be formulated. For example, two students are having difficulty with reading. The appraisals show that both are low in reading comprehension. Further analyses of the difficulty indicate that one student is low in comprehension because of an inadequate recognition vocabulary. The other student is low because he is a word-by-word reader who is so conscious of words that he is unable to group them into thought units. The first case needs remedial work which builds up his consciousness of words and ability to inspect them. Obviously such a procedure would be definitely detrimental to the second case.

Remedial work that is not based upon a through diagnosis is likely to be very wasteful of the time and effort of the student and the remedial teacher. Moreover, remedial work undertaken without adequate diagnosis is likely to fail completely. A student who has had difficulty with reading is already inclined to be insecure. A further failure in the remedial program would prove to be detrimental indeed. The person responsible for the remedial program should be aware of the possible outcomes of failure and should make every effort to insure that each student will suceed in that program.

It is only through a knowledge of the needs of the reading disability case that remedial work can be adjusted to the individual. The diagnosis is undertaken to make the remedial work more effective and to lessen the hazard of failure.

The Program of Diagnosis

Certain practical considerations should be taken into account in organizing the program of diagnosis. In the first place, the program should be thorough enough to enable the diagnostician to obtain a rather complete inventory of the factors associated with reading disability. The inventory should include those measurements and appraisals that seem to be essential in diagnosing the majority of reading disability cases. Through the results of the diagnosis, an adequate remedial program usually can be formulated.

A second consideration is that the amount of testing should be as little as is necessary to give the diagnostician an understanding of each disability case. The plan of procedure is that of first appraising the more general factors, and then gradually taking into consideration as many of the more complex and infrequent ones as are necessary to understand and prescribe for the specific case being studied.

Among the first appraisals are group measurements; some later appraisals can be made only by working individually with the student. In any one factor group measurements, whenever possible, are first utilized; then, if necessary to understand the disability, the factor is analyzed and studied more completely by means of individual appraisals.

In any event, the program of appraisal of any specific factor for each student would go as far as is necessary to furnish an understanding of the disability and no further. Indiscriminate testing is wasteful of time and energy of both the student and the diagnostician. It is expensive and should always be avoided.

A third consideration in organizing a program of diagnosis is that it should be as easy to operate and as simple as is feasible with good results. It is not felt that elaborate, technical appraisals are needed in order to understand and prescribe for most reading disability cases. The diagnostic procedures frequently may be relatively simple ones and ones that are comparatively easy for both the student and the examiner.

A fourth consideration is that the diagnostic and remedial program entail as little expensive equipment and materials as possible. It is often only the rare disability case that requires so complete a diagnosis that the use of expensive equipment and materials is necessary. For such cases a more economical plan is to refer them to specialists who have the needed equipment and training. The appraisals recommended for a program of diagnosis are those that are easily accessible and available for use, that entail as little equipment and as inexpensive materials as is possible, and that are, at the same time, productive of results.

Each factor contributes to an understanding of the reading problem, but the significant consideration in diagnosing the reading case is the total picture rather than any one factor in the picture. One factor or group of factors may be responsible for the disability. However, in making the diagnosis, it would be necessary to see that factor or group of factors in relation to the others.

1. Scholastic aptitude. The measurement of scholastic aptitude is one of the most significant appraisals that are made in diagnosing reading disability. This measure is used, in the first place, as a basis for selecting the cases which actually constitute remedial problems. In the second place, it is important in the prognosis of each case. Remedial work with the student of high mental ability will usually progress more rapidly than it will with the student of lower mental ability. Third, it is essential that the remedial worker know the mental ability of the student in order that materials and instruction can be adjusted to his needs and mental capacity.

2. School history. The yearly records of the school will give the diagnostician information about the progress the student has made throughout his school life. They will also indicate the subjects that have been difficult for him. They will tell, too, any periods of prolonged absence or changes of school. In addition, such records help to locate the grade level at which the trouble with reading may have started. The examiner should make a careful study of the school history of the student and should record upon the diagnostic record those circumstances that are related to reading.

3. Silent reading abilities. The diagnostician may obtain the results of current measurements and in addition the rating of the student in previous years. He should make more extensive appraisals of those abilities in which the student has demonstrated a marked or persistent weakness. This may frequently be done by observational methods. For example, if a given case shows a general inferior ability in locating information, the examiner can observe the student in the actual process of locating informa-

tion in order to detect wherein the difficulties lie.

A comparison between the various silent reading abilities of an individual will prove to be very enlightening to the examiner. If, for example, the student is relatively high in the less exacting sorts of reading, such as skimming or getting the general significance, and is low in the more analytical types, such as reading critically or reflective reading, there is an indication of rather superficial reading or of a lack of the necessary background. If this is accompanied by a relatively high degree of inaccuracy, the diagnosis should be concerned with a more intensive study of the methods used in attacking words and concepts. This comparison indicates that purposes should be provided that cause the student to gain experience in reading more analytically. If, on the other hand, a student has a relatively high proficiency in the more analytical types and a low proficiency in the less exacting sorts of reading, there is an indication of slow meticulous reading with the possibility of other interfering habits. Such a profile indicates that the student may be overcareful when the material does not demand so high a degree of careful reading.

If the student is low, in comparison with his general scholastic aptitude, in all these silent reading abilities, or in a large proportion of them, there is a definite indication that a very careful and intensive diagnosis must be made. This implies, too, that the student needs a more intensive and prolonged remedial program than is necessary for the student who is low in but a few of these silent reading abilities. Fundamentally the problem in the latter case is that of enabling the student to adjust his reading to the purpose at hand. In the case of the student who is low in a large proportion of these abilities, it frequently will be found that he has faulty or interfering habits or other conditions which are causing the general retardation.

4. Oral reading. In order to obtain a measure of oral reading ability, the student may well be asked to read from each of several books of gradually increasing difficulty. If by his oral interpretation the student seems to the examiner to be understanding most of the words and concepts, he may be credited with a successful performance. When the errors become relatively frequent, it may be assumed that his level of oral reading ability has been passed, and an analysis of the errors should be made. The analysis will show the type of errors the student makes most frequently and will be helpful in formulating remedial work. It may be assumed that the student is making the same sort of errors in his silent reading.

5. Ability to work out words in isolation. Isolated lists of the more difficult words taken from material similar to that used for the oral reading should be compiled. The student should read these lists orally so that the examiner may compare the relative effectiveness with which the student can recognize words in isolation and in content. By comparing his performance in oral reading with his performance on isolated lists, an appraisal can be made of the degree to which he is using contextual clues as contrasted with the more analytical word recognition techniques.

The examiner should have the student work aloud on those words that were difficult for him in the previous reading of isolated words. The method used in attacking difficult words can thus be determined. One student may work out the word phonetically. Another may use large familiar parts of words; another may resort to a spelling attack; still another may have no attack at all and may flounder completely over the words that he does not recognize at sight. Such an appraisal will aid materially in formulating the remedial program for the student who has an inadequate attack upon new words.

6. Background of experience. A limited background of meaning may be to some degree either the cause or result of reading disability. In order to estimate the extent of the meaning background of the individual, a semi-controlled interview technique should be used. The examiner should ask some informational questions concerning backgrounds of meanings which would most likely be derived through reading. Then the examiner should ask other informational questions, the answers to which would be derived from experiences outside of reading.

7. Auditory and visual characteristics. The diagnostician should be on the alert for symptoms of visual disability when working individually with reading disability cases. Visual perception tests prove helpful in singling out those students who have defective vision. While there are measures that will aid the diagnostician in locating the visual cases, it is recommended that whenever it is suspected that a student has a visual defect, he should be encouraged to have his vision examined by an expert.

Among the auditory characteristics that are considered to be causes of reading disability are poor acuity, poor discrimination, and lack of blending ability.

Auditory discrimination is the ability to tell the difference between sound patterns. It is this ability that enables an individual to distinguish between words that are very similar in sound and to hear the exact pronunciation of a given word. While poor auditory discrimination is sometimes related to poor auditory acuity, it is not infrequent that reading disability cases are found who have high auditory acuity and faulty discrimination.

Auditory acuity is the keenness with which one hears sounds. It is this ability which is usually thought of when it is said that someone has a hearing loss.

8. Physical condition. If any interfering physical condition is evident, the student should be referred to an expert. Such conditions as malnutrition, glandular disturbances, infections, lack of energy, or any other condition that lowers the individual's vitality will be reflected, of course, in his schoolwork. The diagnostician and the teachers should be on the alert for physical disabilities.

9. Emotional and other personality disturbances. There is a marked relationship between emotional and other personality disturbances and

reading disability. Whether or not the personality condition is the cause of reading disability or the result of that disability, the remedial worker should be aware of any such condition. An understanding of the student as a person is highly essential if adequate remedial work is to be done.

10. Interest in and attitude toward reading. The reading interests of disability cases are usually meager and immature. In the first place, the severely retarded reader shows little interest in reading; that is, he does not read extensively. In the second place, the interests in reading that the student has are often relatively immature.

In order to improve the interest of the student in reading and his attitude toward reading, the diagnostician must determine what the interests of the student are. The remedial teacher must find material at the reading level of the student that has intrinsic interest for him. The best methods of finding out the student's interest in and his attitude toward reading are interview and observational techniques.

After the appraisals have been made, the diagnostician should gather the data together. He and the student discuss the atypical performances. They study the interrelationships and form an hypothesis as to the nature of the difficulty. After making the estimate as to the nature of the case, the diagnostician formulates a remedial plan.

The remedial plan must be considered to be a tentative one. If the student does not respond to the training in a relatively short time – one to three weeks of instruction – it is wise to reinspect the data in order that a reformulation of the remedial plan may be made.

Summary

In order to understand the nature of a reading disability, it is necessary to make sufficiently complete appraisals to study the symptoms and to determine, if possible, the causes of the disability. Diagnosis, thus, is undertaken so that the disability may be more thoroughly understood in order that an appropriate program of remedial instruction may be set up. As the poor reader is already insecure, it is especially important for the remedial program of instruction to be one that is appropriate. The program should lessen the hazard of failure, not add to it.

PROBLEMS IN ESTABLISHING DEVELOPMENTAL READING PROGRAMS IN JUNIOR COLLEGES

Elizabeth S. Johnson
Diablo Valley College

My subject has been described as "Problems in Establishing Developmental Reading Programs in Junior Colleges". Before discussing the mechanical and professional problems which those familiar with the developmental reading concept will feel are pertinent, it should be noted that teachers and administrators who have not yet had the experience of establishing such a program are likely to discover that their first problems will be — education.

The Development Reading concept is new to, and largely misunderstood by most students and the lay public. Further, and more appalling, Developmental Reading is not generally recognized as a need or as a valuable learning technique by educators in other fields. However, it has been the experience of most Developmental Reading teachers that the values of the program are quickly recognized by both students and educators after it has been put into operation.

The technical problems discussed here are those which were, and are, encountered at Diablo Valley College. Conferences with other educators in this field indicate that these tend to be universal problems, varied primarily by purely local differences in intensity or importance.

Historically, Diablo Valley College is dedicated to a general education concept. The written philosophy of the college states: "We assume a certain degree of maturity and preparation on the part of our students. In serving their needs we recognize that these students come to us with a variety of academic expectations and a variety of objectives as well as with a variety of proficiencies. We recognize that there are many kinds of intelligence and skill and that we have the obligation to help students to develop understanding and skill through proficiency-building experiences which are appropriate college work."[1] There is no "tracking" system at Diablo Valley College.

The California State Education Code states, in effect, that the governing board shall permit the enrollment of any high school graduate, or anyone over the age of 18 years who can benefit from instruction regardless of previous formal education.[2] Contra Costa County colleges are required to enroll all who meet this minimal standard. We do have a probation system, however, a Grade Point Average of 1.5 in 11 or more units attempted.

There is no sub-freshman, or "bone-head" English course, nor is Communications 116, Developmental Reading, a sub-freshman course. The wide individual variations in English are met through a tutorial workshop program taken concurrently with Freshman English.

The Developmental Reading course, hereafter referred to as "116," has free enrollment. Interestingly enough, there is no stigma attached to this course as was evidenced by the fact that a statistical study showed that over one-third of the "116" students were on the Dean's List with a 2.9 GPA on a 4.0 scale.

The course began in 1950 with five students (veterans from the military services) who came to the Counseling Office three times a week for six weeks. We had only the Co-Op English test scores and the College Aptitude tests for diagnosis. Since the Counselors were enthusiastic; the administration supportive, and the students grateful, we progressed rapidly.

It was immediately apparent that we had highly motivated students. They were equally divergent in skills. Since their motivation was newfound, their reading background was meager. Many were military veterans whose reading had been confined to Mickey Spillane whose colorful (?) vocabulary left little for the thought processes to deal with, or other, even more vibrant picture-type magazines with little verbal message either provided or necessary.

The instructor needed to fill in the chasm between that material and academic readings so that the student could more rapidly grasp the concepts presented to him in his Political Science, Literature, Psychology and Sociology readings. At the same time, there was the problem of justifying General Education and the need for broader scope to these students who, obviously feeling a need to "make up for lost time" demand that they be allowed, as they said, "to get on with their majors."

The opening of another campus, Diablo Valley College, brought four classes of Developmental Reading. "The" instructor taught at both colleges, some 20 miles apart, and also was a counselor half-time.

Each campus immediately had identity. One, the original, has remained largely comprised of a wide variety of races, while the Diablo Valley population was drawn from white, middle-class families, whose students, for economical reasons chose not to enter four-year schools or could not enter State Colleges or the University, and students from industrial families in which the parents had little education beyond high school.

The College District was voted into existence by these people, but at first the tax base was industry, public utilities, and rather exclusive areas inhabited by wealthy persons with large land holdings. The present status has shifted somewhat with an increased suburban-type population but with the major portion of college funds still derived from utilities and industry.

The need for building an appreciation for reading as such, as well as for Developmental Reading techniques became apparent. Many of the students' problems stemmed from lack of reading background and were environmental – no newspaper in the home except perhaps a weekly church bulletin; no magazines; no books.

There were emotional problems which seemed to stem from uncertainty or insecurity, due perhaps to the population mobility, which was so widespread during World War II, and its attendant sketchy and badly articulated educational experiences.

The Contra Costa colleges were adjacent to large ship-building establishments, Naval and Army supply depots, and industry. Trained teachers were at a premium. Anyone, regardless of age, experience or suitability could get a position in education. Their attitudes and philosophies often were those of one or two generations previous to this time. They had had a more stable environment and were often ignorant of, and perhaps unsympathetic to the confused, insecure youth of the war years.

Great resistance to traditional literary work was apparent in these young people. Most of their experiences in this area carried unpleasant memories, whatever the reason. The dichotomy of motivation for achievement, and distaste for the subject matter posed a real problem.

The college philosophy was extremely democratic. A Developmental Reading course which was stimulating and allowed individual attention was received with enthusiasm by English teachers, Counselors, and Administrators.

The lack of materials was appalling. We gathered our own. There were hardly any texts available. A tachistoscope and four reading accelerators were obtained. This equipment was moved by the instructor each day from campus to campus. Testing materials were scarce. We used the English Co-Op (and still include it) plus SRA Reading Records. The counselors also worked with their counselees under our direction.

Then came the need for articulation and transfer credit recognition. Dr. Guy Buswell of the University of California acted as survey consultant, but actually merely supported what we were doing. He made no changes. The course now carries three units toward the A. A. degree and transfers as an elective in some colleges.

As our population increased, the college staff increased – but not the reading staff. One full-time reading teacher still served. There were two or three instructors who had worked voluntarily in the San Francisco State College Clinical Laboratory who joined in teaching additional sections. But, reading teachers at the college level, particularly of counselor-psychology background were, and still are, difficult to locate in the West.

To sum up our experiences at Diablo Valley College and those of other colleges, there are seven basic problems in establishing Developmental Reading programs in the Junior College.

It would be my preference to give these remarks under the subtitle, **Reading for the Many** since the Number One problem concerns getting help to any who want to improve as well as to those who seem to need it. We, as educators, feel that we must present a strong Developmental Reading program to them. Anything else would mean the failure of a community college to meet its educational responsibility.

Problem Two concerns establishing limited group work without losing the one-to-one relationship which is necessary.

Increased enrollment, from 508 full-time students on the two campuses in 1961 to 8,797 full-time students in 1964, has increased the number of Developmental Reading class sections at Diablo Valley College from two in 1950 to thirteen in 1965. Even with the heavier load the instructor was able to do a more thorough job of outlining individual reading programs when the class size remained at 15 or fewer students.

The nature of Developmental Reading seems to foster a rather unique attitude in the student that the reading instructor is one who is not only able to help him solve some problems, or gain improvement which is particularly valuable, but is also one who has the necessary knowledge, the desire, and the time to do so. To the student, Developmental Reading is less a class effort than an individual educational relationship with the instructor.

Problem 3 concerns subject matter and materials, tests, etc. There are now many fine sources for exercise work, practice in reading skills and evaluating progress. At Diablo Valley College, we have tried to gather materials which will support the philosophy that most students, given various methods by which to perform reading tasks, will be able to apply those which fit their individual needs and will supplement this practice through application in other instances of college and educational reading situations.

Problem 4 relates to the required evaluation for units of credit and articulation with other colleges. Many four-year colleges tend to correlate Developmental Reading with their own sub-freshman and remedial reading courses but frequent renegotiation, we have found, results in a recognition of the values of Developmental Reading courses. Recent decisions of state colleges to eliminate remedial work of any kind has made our task more difficult.

Problem 5 – that of adequate staffing and special training of reading teachers is probably one of the most difficult for any Junior Colleges wishing to establish a Developmental Reading program. The desirability for, amounting to necessity for, small class size poses a budgetary and/or teacher-load problem. Add to this the scarcity of opportunity for the special training necessary for teachers of a successful reading course and the barriers may seem well-nigh insurmountable.

I would add to this that a Developmental Reading teacher should have some background in counseling or other psychological work. We have found it almost necessary in diagnosis of problems, ability to work with individual students or individual programs, and the ability to work with students with a wide range of abilities and goals.

Problem 6 is involved with the weaknesses which remain in the Developmental Reading Program not only at Diablo Valley College but throughout the country. They have become more apparent as enrollment increased and instruction – because of a lack of norms and standards – became more varied. These weaknesses center around the inadequacy of the diagnostic materials employed, the inadequacy in variety and amount of material available, and the scarcity of trained personnel.

Problem 7, the mounting difficulty in maintaining quality in the program, is closely allied to those weaknesses mentioned in Problem 6. It is difficult indeed to maintain the quality and scope of a good program in the face of those weaknesses and the increasing pressures to content ourselves with those facets of the Developmental Reading program which have become "popular."

These are the problems. Some of them are difficult to cope with. Those of us who teach Developmental Reading are concerned. We are not dismayed. The value of this program is only beginning to be appreciated.

Bibiographical References

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DESCRIPTION OF A READING PROGRAM FOR PRE-COLLEGE STUDENTS IN A HIGH SCHOOL

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The program at Massapequa High School was first established in order to improve the skills of the college bound juniors and seniors for the advanced reading requirements they will encounter. The ever-growing competition in national competitive examinations and the race for scholarships carry with them added incentive for the course.

Each September the reading personnel and the guidance counselors visit all Track A (enriched course of study) and B (the average or state required course of study) English classes to explain the purposes and objective of the "Pre-College" course. On the application form the student who voluntarily enrolls submits his schedule, showing his free period. The youngsters are scheduled usually no more than fifteen to a group for two periods a week on alternate days, Monday and Wednesday, Tuesday and Thursday. The courses of study, Basic I, Basic II, Advanced I, and Advanced II, cover the junior and senior years and are arranged with a developmental growth pattern in mind. The students' scores on the Ohio Psychological, the Otis Intelligence (Gamma), and the Form R, C2 (Higher Level) Cooperative Reading are obtained from the Guidance Department. Students attaining scores of the 24% ile or below (based on entering college freshmen norms) are given the Iowa Silent Reading Test Form Am, (Revised Edition) for diagnostic purposes. If needed, individual remedial instruction is also programmed.

Vocabulary Development and Enrichment

All vocabulary is taught in meaningful context. Synonyms are taught first for precise understanding from which the antonyms can be construed by deduction. Homonyms are brought to the student's attention to alert him to difference in spelling and the corresponding difference in meaning. Figures of speech, colloquialisms, and terminology esoteric to particular fields of endeavor, are brought into the picture for the sake of enrichment and interest. Practice in word relationships or word analogies is not only a tremendous help in preparation for the College Boards, but sharpens the students' wits for problem solving, logical thinking, and analogies in any form.

In helping students overcome deficiencies in the word attack skills, we are given an early opportunity to introduce the philosophy of coextensive education, of leading the youngster to see that he has not been learning subject matter "in vacuo" but that in reading English he can often use his list of common Latin and Greek affixes and stems.[1] This is not meant to be a rote-memory affair but learning through frequent repetition in meaningful context.

The vocabulary is introduced in meaningful sentences. The students are given five to ten minutes for quick recognition. The teacher takes it from there by asking for individual oral responses around the group. Whenever problems in word attack occur during recitation, the problem is handled at once.

Rate of Reading

The 45 minute period is divided between vocabulary and timed reading which includes answering questions to test comprehension. According to standards set by reading specialists in general, a student should be reading narrative material at the rate of 300-350 words per minute at the end of the junior year at the rate of 350-400 words per minute at the end of the senior year in high school.

Short paragraphs and longer selections through the various general science and essay materials are timed in the regular sessions. The teacher, using a stop-watch in his hand, checks on the board a prepared timing table in minutes and seconds. Particularly slow readers are weeded out for Telebinocular screening in order to eliminate a possible functional defect in vision. In case of poor perception, planned techniques, such as the Tachistoscope and exercises in span and discrimination, have been effective.

For added stimulation we use the filmstrips of the Educational Developmental Laboratories and their Controlled Reader machine. For the student who is so well motivated that he would be willing to give up an extra study hall on Fridays, we have the SRA Reading Accelerator.

Skimming

A constructive approach is taken to skimming. In order to demonstrate this skill one lesson might involve determining a clue word in a topic sentence, previewing in the survey technique, hunting for a synonym in a dictionary or theasaurus, or searching for a description of Doric columns in an encyclopedia. Expansion on the positive aspects of this technique requires a quick review of the definitions of a novel, a novelette, a short story and a vignette.

Comprehension and Interpretation Skills

Reading comprehension is an involved thinking process which requires facility in manipulating verbal concepts, the ability to incorporate one's knowledge from past experience into the present content, and to harmonize the total into a meaningful whole. To develop and enrich this skill, we teach the reader to utilize certain contextual clues or key words, to recognize paragraph patterns, and to employ skimming in a study technique.

The study technique is essentially very much the same as the Survey Q3R by Dr. Francis Robinson. We find it easier to teach it as the P.Q.R.S.T. formula; and because of its alphabetical order, the students remember its organizational pattern better.

This formula is also recommended to the students for note-taking, for eliminating the superfluous. Here again, the Ebbinghaus law of "forgetting" is invoked, and the students are apprised of the need for review, and for relating the current assignment to previous notes, again emphasizing meaning opposed to memorizing by rote.

Exposure to information is not synonymous with learning. As experimentally verified, learning involves understanding and integration as well.[2] In order to evaluate progress at the close of the semester's training the equivalent forms of measures are used.

In comparison studies that have been made before and after training, we find that the training is materially significant to the improvement of reading skills. Average College Board gains for a semester of work, two periods a week, are estimated at about 50 points, but we have had students who have made jumps up to 150 points in two semesters of work. With the proper motivation and consistent developmental practice, growth is more than a possibility.

The one factor that should be stressed in the success of the program is the use of a teamwork approach. Special referrals to Reading by counselors and the psychologist may bring a student's latent academic potentials to the surface. The reading consultant, moreover, refers freely to the psychologist for a more valid appraisal of a student's intellectual capacity, or for an evaluation of emotional indications which may be blocking learning.

Although the teacher's primary role is to develop skills, he also functions in a supportive role, gently guiding, sometimes forcefully urging, but always himself learning, through conferences with others, through co-operative interchange of ideas, to the end that students are encouraged to converge their full intellectual forces into productive results.

We find that a general major defect is not so much the ignorance of basic reading skills but the inability to apply these skills. When the student will have been led to enjoy reading on the outside on his own and will have learned to apply more effectively the skills in his daily situations, then we shall know that our goals have been achieved. Above all, our approach should be dynamic and flexible; it should be modifed to continued to elicit interest—never to sink to a level of static mediocrity.

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PROBLEMS TO ANTICIPATE IN ADMINISTERING A COLLEGE READING CLINIC FOR CHILDREN WITH READING DISABILITIES

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In attacking a topic such as this, one is immediately placed in a dilemma since virtually everything presents at least a potential problem. In addition, the word "anticipate" lends a bit of confusion, since the dictionary refers to it as "look forward to" and "take care of ahead of time." Unfortunately, the context in this case is not too helpful, so the anticipation must necessarily be in both directions.

For purposes of simplicity, three general problem areas can be delineated. These are clinic administration, considered in its broadest sense, staff, and function.

It would seem obvious that regardless of the precise nature of a college reading clinic, in terms of function, the basic ingredient is people. As a consequence, budgetary considerations are necessarily of prime concern. Most college reading clinics can be identified as being either service oriented or as having a basic commitment to training. Still others lay claim to research as a primary function.

There can be little doubt that the extent to which a clinic engages in service activities is more often than not determined by the nature and extent of institutional financial support.

If, for example, a clinic must be self-supporting, it must of necessity offer a wide range of services in order to provide operational income. Since at least some of these services involve individual attention to children, which is expensive, other activities must be provided which have a more favorable time-income ratio. This also suggests that all clinic staff members must be engaged in service activities. In other words, they must all produce income, and as a result, staff specialization is frequently limited and in some cases essentially impossible. On the other hand, emphasis upon the training function generally provide substantial if not total institutional support, and frequently provides for substantial specialization in terms of staff.

The problem is not quite that simple, however, since virtually no college reading clinics provide service to children without fee. As a result, restrictions are immediately placed upon client availabilty. And it is common knowledge that reading disability does not necessarily occur only among those who can afford treatment. So the problem of how to support a clinic operation bears rather directly upon the function or functions which a clinic might have.

In terms of service to children, it is obvious that a clinic must concern itself with both the diagnosis and treatment. Some clinics function primarily as diagnostic centers although a rather exhaustive search of available directories will reveal none which offer only remedial treatment.

A related question, and perhaps a prior one, deals with the nature and source of referrals. Should referrals be accepted from parents alone or should they come only through educational, medical or social agencies in cooperation with parents? Judging again from variability in practice, it is apparent that differences of opinion do exist. The answer may well depend, at least in part, upon the nature and availability of treatment. If, for example, the primary responsibility for treatment is to be borne by the clinic, then it would seem appropriate to accept referrals from parents alone. If, on the other hand, the clinic is to work cooperatively with a school, for example, or function only after all other treatment possibilities have been exhausted, referral through other agencies is perhaps imperative.

Once a child has been referred to a clinic for study, the question becomes one of how to proceed. Again, there are extremes in practice, ranging from multi-faceted, individualized diagnosis to the so-called "full-factory equipment" or standard diagnosis. It would seem that a clinic which is not prepared to work intensively with individuals, that is, if it does diagnostic work only in terms of prescribed remedial program — such a clinic is of questionable value.

Unfortunately, there exist too many "clinics" offering such standard diagnostic and instructional programs which are justified on the basis either of expediency or equal rights. That is, either they reflect the possible limit of clinical services or a belief that each child is entitled to the same type or amount of attention. The introduction of variability thus becomes a sort of violation of the child's birth-right.

Many problems encountered in a reading clinic relate directly to the nature and course of diagnostic work. Since a minimal program for clinical diagnosis is presented in another portion of these proceedings, suffice it to suggest that within the clinical setting, minimal programs might well prove to be entirely inadequate.

Some related questions do arise, however: How best can case history information concerning a specific child be gathered? From what sources can or should preliminary data be obtained? What use can be made of cumulative school records? Should a preliminary physical examination be required?

Additional questions relate to post-diagnostic considerations: To whom should the results of the diagnostic examination be reported? What should be the nature of the diagnostic report? In addition to interpreting the results of the diagnosis and outlining a program of possible treatment, what additional functions might such a report have?

Aside from matters of staff and scheduling, a clinic should normally encounter relatively few problems associated with remedial work as such.

One which might well be raised, however, since it appears to be both common and serious, is that which is related to follow-up activities. For many reasons, remedial work carried on within a clinic is intensive and of relatively short duration. Corrective work done by other agencies or individuals normally falls outside the control of the clinic. Yet, the validity of the diagnosis can only be determined by the effectiveness of the instructional program derived from it. By the same token, intensive remedial instruction can only be evaluated in terms of functional reading efficiency. Aside from occasional limited follow-up studies, relatively little is known of the effectiveness of the work of reading clinics.

Finally, brief consideration must be given a third possible reading clinic function – research. While at least some institutional clinics lay claim to research as a primary function, and most consider it to be a significant part of their work, relatively limited significant research can come from clinics dealing with children unless considerable control is exercised over the selection and admission of these children.

Certainly, the matter of investigating the etiology of reading disabilities is of extreme importance. Numerous studies which describe the characteristics of reading disability cases have been conducted with reading clinic populations. We find, for examples, clinical studies which identify a wide range of anomalies operating as significant causes of reading failure. Yet other studies report these same anomalies appearing with approximately equal frequency among normal and disabled readers.

It is important, then, that children whom, for various reasons we find in a reading clinic not necessarily be considered representative of children who have reading disabilities.

Nor is there wisdom in suggesting that because of the problems associated with selection of subjects for study, research in a clinic is impossible, or even undesirable. The problem does, however, become one of the nature of research which might appropriately be done in this setting.

Three areas would seem to lend themselves to clinical research. First is the matter of developing more effective diagnostic instruments and procedures. The second relates to the exploration of variable instructional approaches and the third involves the development of specific instructional materials. Only in the first instance would it appear necessary to extend beyond clinic populations since judgment of materials and methods of instruction can well be done on a pragmatic basis.

Although it would seem unnecessary to state, the research function of a college clinic which deals with children should not be confused with research activities of clinic staff members.

Summary

An attempt has been made to identify some problem areas in a college clinic for children with reading disabilities. In some instances, the direction of possible solutions has been suggested. In many this has not been done, rather pointing out variability in clinical practices, both in terms of necessity and desirability.

IS THERE A RELATIONSHIP BETWEEN THE USE OF READING MACHINES AND PSYCHOLOGICAL STRESS?

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In thinking about this topic, I began by considering the nature of psychological stress, how it might be measured, aspects of stress situations, and emotional reactions to frustration. I started with the English and English psychological dictionary[1] from which I learned that in order for a force to be termed stress it must be strong enough to cause strain. Strain, in turn indicates extreme injurious tension. Tension is an emotional state resulting when needs are unsatisfied or goal-directed behavior is blocked; a condition of pressure and readiness to act, of partly restrained restless activity, of unrest and uneasiness. Now, if reading instruments had this kind of an effect upon their readers, if intense effort or strained exertion accompanied the use of reading instruments and if the result of the strenuous effort produced extreme, injurious tension, either emotional or physical, would not that fact be clearly evident to all observers? Let me state here that, of course, I am not considering the misuse of any instrument. We must discriminate among the various types of instruments, their materials, and intended purposes, and then use them accordingly. Correspondingly we must evaluate the instruments of each producer, their materials, techniques, and results, for these can vary as greatly as any other kind of instructional materials.

Let us return to the problem of identifying psychological stress. Robbins [8] reminds us that frustration is a phenomenon of life itself; also, that the inauguration of new steps in development and in new experiences is accompanied by frustration. If the feeling of discomfort is mild, it may stimulate activity toward mastery of the new situation. A successful effort affords the child a feeling of pleasure, and thereafter, he is more likely to regard other new opportunities as something interesting to attempt. This is the way we would like all learning situations to be. In contrast, if the frustration presented by the new experience is overwhelming, the child derives a feeling of abandonment, and engages in flight reactions of disinterest, submission, or apathy. Thereafter, he becomes more reluctant to try new things. Overwhelming frustration supplies the feeling of stress that induces flight reactions. Naturally, we all seek to avoid this kind of stress or strain.

Psychological stress might, of course, be evaluated by galvanic skin reactors or chemically prepared blouses. Another method might be in terms of observed avoidance behavior and approach behavior. Still another way might be the presentation of preference situations in which the child expresses his choice of using or not using the instrument. Also, verbal self-reports might be a means of assessing the user's pleasure, and concomitant lack of stress, in using the instruments.

The great dearth of studies of psychological stress related to reading instruments is unfortunate for our discussion today, but the mute absence of them is perhaps the best possible evidence that the problem is of minimal concern. In such absence, however, I have collected whatever related information I could find.

From the viewpoint that casual observation can reveal evident stress, I should like to refer to the report of William D. Sanborn [8] who visited eleven school communities in New York, Connecticut, and Massachusetts to observe reading programs in action and to interview the personnel responsible. His particular purpose was to gain information about automated equipment or related devices, especially EDL instruments and techniques. His report is in the form of interview notes and general statements.

Evidently, neither Dr. Sanborn nor the personnel he visited found an amount of stress accompanying the use of the various devices sufficient to report; rather, the reactions of students and teachers were enthusiastic. Obviously, these were good programs and instances of good usage.

A more objective project of research has been conducted by personnel of the Bureau of Educational Research of the Board of Education of the City of New York under the direction of Dr. Samuel D. McClelland.[4] The evaluation followed two years of use of the Keystone Tachistoscope in five elementary schools; the Controlled Reader in seven junior high schools; and the Percept-O-Scope in five senior high schools. Some of the schools were used in the preliminary phase of the evaluation during which visits were made and tentative questionnaires were tried out. Included in the report were three elementary schools, five junior high schools and four senior high schools, comprising respectively 60, 70 and 80 percent of the schools using the instruments. In these schools a total of 20 teachers taught classes using the reading machines, and all 20 responded to the questionnaires. The pupil population of the report included 52 elementary, 308 junior high, and 197 senior high school students. Elementary and junior high pupils were those with low reading achievement, in terms of lack of speed, poor comprehension, and limited vocabulary. Most senior high school pupils were college-bound and Honors English students who elected the instruction to increase their speed and comprehension.

While it would be interesting to go into all the various questions reported, those which assess the pupils' reactions are most useful in search of stress related to the use of reading machines.

Table I reports the answers given to the question: "Do you feel you have improved since attending the special reading class?" Among elementary school pupils 97 percent of the boys and 91 percent of the girls replied

Table 1

Response Trends of Boys and Girls in Elementary, Junior High and Senior High Schools to Question 4

"Do You Feel You Have Improved Since Attending the Special Reading Class?"

Level	% Yes		%No		% Don't Know		% No Answer	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Elem. N:B=29 G=23 KEYSTONE TACHISTOSCOPE	97	91	0	0	3	4	0	4
JHS. N:B=157 G=151 CONTROLLED READER	87	78	2	5	10	17	1	0
HS. N:B=139 G= 58 PERCEPT-O-SCOPE	96	72	1	5	3	19	0	3

that they had; among junior high school pupils 87 percent of the boys and 78 percent of the girls said they had improved; and on the high school level 96 percent of the boys and 72 percent of the girls said they had improved. It is clear from these results that, according to pupil opinion, improvement in reading had occurred while attending the special class.

Table 2 gives the number of books read outside of school. Although there was no attempt to describe the length or kind of books, the mere number of books read is probably a valuable indication of the enjoyment of reading, and so may be logically interpreted to indicate an absence of stress.

On the elementary level, 83 percent of the boys and 65 percent of the girls read 21 or more books, whereas only 12 percent of the boys and 17 percent of the girls on the junior high level read 21 or more books. High school boys read more books than high school girls. Thirty-seven percent read 21 or more books as compared with 2 percent for the girls. It might be conjectured that the reading program provided greater impetus to the participating boys than to the girls in enlarging their interest in an appreciation of books. Pupils' reports of the number of books read outside of school during the period they received special reading help appear better than average.

Table 2

Response Trends of Boys and Girls in Elementary, Junior High and Senior High Schools to Question 7
"Check the Number of Books or Stories You Have Read Since The Beginning of this Term Outside of Class"

Level	No. of Books Read	% Boys	% Girls
Elem.	1-10	10	4
N: B=29	11-20	7	30
G=23	21+	83	65
KEYSTONE TACHISTOSCOPE			
JHS.	1-10	58	53
N: B=157	11-20	30	30
G=151	21+	12	17
CONTROLLED READER			
HS.	1-10	35	67
N: B=139	11-20	20	28
G= 58	21+	37	2
PERCEPT-O-SCOPE	No Answer	0	3

Table 3 gives us answers to the question "Has the use of the machine... HELPED YOU?" Except for the high school girls, about 90 percent or over of the various groups answered "Yes." Two-thirds of the high school girls accepted the machine as helpful, but one-third failed to endorse the Percept-O-Scope. No ready explanation was apparent, and none was attempted.

Table 3

Response Trends of Boys and Girls in Elementary, Junior High and Senior High Schools to Question 8
"Has the Use of the Machine or Machines in the Special Reading Program HELPED YOU?"

Level	% Yes		% No		% Don't Know		% No Answer	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Elem. N:B=29 G=23 KEYSTONE TACHISTOSCOPE	97	100	3	0	0	0	0	0
JHS. N:B=157 G=151 CONTROLLED READER	94	89	6	11	0	0	0	0
HS. N:B=139 G= 58 PERCEPT-O-SCOPE	98	66	2	33	0	1	0	0

In Table 4, however, in answer to a query about interference of the machine with reading, only the elementary girls registered a sizable "Yes" of 22 percent. A decisive majority of the students, 78-97 percent indicated that the machines had not interfered with their reading.

Table 4

Response Trends of Boys and Girls in Elementary, Junior High and Senior High Schools to Question 9
"Has the Use of the Machine or Machines in the Special Reading Program INTERFERED WITH YOUR READING?"

Level	% Yes		% No		% Don't Know		% No Answer	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Elem. N:B=29 G=23 KEYSTONE TACHISTOSCOPE	3	22	97	78	0	0	0	0
JHS. N:B=157 G=151 CONTROLLED READER	6	9	91	89	0	0	3	1
HS. N:B=139 G= 58 PERCEPT-O-SCOPE	6	7	89	91	0	0	5	2

Table 5 gives the percentages of "Yes", "No", and "Don't Know" responses to Question 10: "Would you like to continue to use the reading machines next term?" Although the percentages of favorable responses were in the 70-80 range, rather than in the 90's as they generally were to the other items discussed, the distribution tends to indicate that these students would like to continue with the programs as they were being conducted. The percentages of "No" responses, (13-26) may reflect the fact that sufficient improvement had been made by these students to warrant discontinuance of the machine.

Table 5

Response Trends of Boys and Girls in Elementary, Junior High and Senior High Schools to Question 10
"Would You Like to Continue to Use the Reading Machines Next Term?"

	% Yes		% No		% Don't Know		% No Answer	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Elem. N:B=29 G=23 KEYSTONE TACHISTOSCOPE	76	87	24	13	0	0	0	0
JHS. N:B=157 G=151 CONTROLLED READER	81	76	19	23	0	0	0	1
HS. N:B=139 G= 58 PERCEPT-O-SCOPE	83	71	17	26	0	0	0	3

Table 6 presents the responses to "Do You Think You Would Have Made As Much Improvement In Reading If the Reading Machines Had Not Been Used?" The elementary and high school boys were most definite in attributing their progress specifically to the use of the machines. About one-third of all the girls were unsure. An additional third of the high school girls were definite that their improvement would have been as great without the machines. Generally, the boys valued the reading machines as essentials more than the girls.

Table 6

Response Trends of Boys and Girls in Elementary, Junior High and Senior High Schools to Question 11
"Do You Think You Would Have Made as Much Improvement in Reading if the Reading Machines Had Not Been Used?"

	% Yes		% No		% Don't Know		% No Answer	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Elem. N:B=29 G=23 KEYSTONE TACHISTOSCOPE	14	9	79	52	7	39	0	0
JHS. N:B=157 G=151 CONTROLLED READER	11	15	54	50	35	35	0	1
HS. N:B=139 G= 58 PERCEPT-O-SCOPE	7	36	88	34	0	28	5	2

A number of open-ended questions afforded pupils the opportunity to express personal opinions and reactions in their own words, with the hope that these responses might enlighten the answers supplied by the checklists. Two questions are of particular importance for our topic. One of these asked, "What have you enjoyed MOST in the reading program this term?" Since different programs and equipment were involved at each of the levels, it was surprising to find a high degree of consistency of response for all students at all levels. While the wording of individual responses varied, the general tenor indicated three broad categories that had been enjoyed. According to frequency of response, they were: (1) the equipment and its accompanying materials, (2) personal feelings or satisfactions, (3) other reading materials and techniques.

Most of the students at all levels indicated their first choice by the broad category "machines." A small number at the high school level qualified their answers by naming the particular machine they had been using. Most of the students at all the levels indicated they liked "the stories." From the juxtaposition of the above responses it may be assumed that the students were indicating the stories used with the machines. The sole exception was the response of the pupils at the elementary level who answered, "machines" (the Keystone Tachistoscope was used at this level and the materials are non-verbal).

Responses in the second category – personal feelings or satisfactions – were expressed most frequently by the high school students, to a lesser degree by the junior high students and not at all by the elementary students. Remarks such as, "read more outside of the class," "read faster," "cuts down on homework time," "makes taking exams easier," "increases vocabulary," were frequently noted. A rather unexpected but revealing comment was noted in the responses of about 20 percent of the junior high students who said they had, "enjoyed the teacher and their classmates" in the special reading class with the Controlled Reader.

When discussing the third category – other materials and techniques – no clear pattern could be traced at any level. The high school students generally named titles of books and the junior high students focussed more on other techniques, among them, – discussions, word games and oral reading.

The question of "What have you enjoyed LEAST in the reading program this term?" gave students the opportunity for expressing negative feelings about their reading programs. An examination of the responses revealed that 43 percent of the students at all levels failed to respond to this item. Another small percentage [5] parried the question and answered it in positive terms saying they "liked everything." This high percentage of abstentions (48) contrasted sharply with the less than 1 percent who failed to respond to the opposite question. The response of the 52 percent tended to cluster around several broad categories, listed in order of frequency of response: (1) physical difficulties, (2) classroom setup or machine difficulties, (3) displeasure with reading materials, (4) personal feelings, or dissatisfactions.

Twenty-seven percent of the elementary pupils who used the Keystone Tachistoscope responded and were concerned with only one of the categories – physical difficulties. They complained about the frequent increase of the speed of the machines.

At the Junior High level where the Controlled Reader was used, the majority of responses focussed on personal dissatisfactions. The pupils resented missing lunch periods, English, Social Studies, Shop, P.E., or other subjects. An appreciable number objected to the additional homework they evidently were required to do. A smaller group reported in the other categories with remarks as, "the machine hurts my eyes," "the materials are boring," "the speed is increased too often."

The high school students using the Percept-O-Scope answered most fully and revealed that their dissatisfactions lay mainly with materials, not necessarily those accompanying the machines.

Approximately 15 percent of the total group expressed a dislike of machines. Some of the reasons given were "eye strain," "headache," "psychological effect of the bar movement," "noise of the machine," "difficulty in seeing the machine."

Again, I want to call your attention to the differences in the instruments and materials of the different producers. Also, let me insert that instrument techniques have a way of bringing to the surface existing problems in visual coordination and accommodation. Where this occurs instruments perform a diagnostic function in addition to the training function by indicating those students who need to be referred to a specialist in problems of vision. Naturally, whenever a child experiences real discomfort, use of the instrument should be discontinued for the time and the child allowed to rest. In such cases, his physical disability will cause fatigue because of the extra effort involved.

Returning to the report, since 48 percent of the students did not respond to this item about what they enjoyed least, it may be inferred that this group generally accepted and endorsed the programs as they were being conducted, including techniques, methodology, and materials.

The general consensus of the teachers in this report was that the equipment was useful for most classes, despite the level of ability on which they could function in reading skills. No clear-out determination could be made on the elementary level concerning the comparability and effectiveness of the Keystone Tachistoscope, in relation to other more commonly employed reading techniques since the responses of all three teachers differed. The junior high school teachers expressed unanimity in judging Controlled Reader techniques to be superior to those more commonly employed. The majority of the senior high school teachers felt that there was little difference between effectiveness of using the Percept-O-Scope in their program and not using it. So much for the report from New York City.

Adopting the premise that emotionally disturbed children would suffer stress with less provocation than normal ones, I contacted some teachers who work with disturbed children. First I spoke with Leonard Hampson [5] who is principal of the school of the Governor Bacon Health Center in Delaware City, Delaware. This is an old famous public-supported resident treatment center, caring for 120-150 children who are (1) emotionally or socially disturbed; (2) emotionally or mentally disturbed; or (3) in need of shorter care. Mr. Hampson said that they had indeed used reading instruments over a long period of time, and that I could get more information by talking to one of the teachers. So then I spoke with Littleton P. Mitchell, [6] a teacher who has been at the Center since 1948. He told me that his are pupils who score 85 or above full-scale Q on the Wechsler Intelligence Scale for Children, and 65 or below on the Wide Range Achievment Test. His classes are limited to 10 pupils, ranging in age from 13 to 16 years. Mr. Mitchell told me that each year since 1950 he has started his work by entirely eliminating the use of books. He reported that these children have rebelled against books, and that giving more books to them contribute to problems of classroom discipline. He uses the EDL Tach-X blank filmstrips on which he writes the letters, words, and numbers he needs in addition to the commercially prepared films he has. With these he introduces words, teaches word attack skills, and most importantly, uses the instrument to develop interest in learning to read. In his own words, Mr. Mitchell said that "the device relieved the tension of the children in the class." He told me that the children readily adapted to the instrument and that they soon made a game of "beating the machine," competing with it rather than with each other. This has become a particularly important point since, in addition to the usual emotional problems, they also have racial disturbances in their group.

In regard to the use of the Tach-X as a stepping stone to books, Mr. Mitchell was delighted to tell me that this is the first year since 1950 that a class has progressed far enough to be able to shift from the use of the instrument to books, exclusively. He said he would still rely on the Tach-X to introduce words. This year's class has progressed from working at third grade level to fifth grade level.

Let me say here that it seems evident that some of our students, particularly those who fall into the category of remedial, simply are more responsive to a physical challenge than to an academic one. And a reading machine seems to fulfill this need more effectively than a book.

I also spoke with Dr. Walter Kabis, [7] formerly Director of Education and Recreation at Governor Bacon Health Center, now of the Delaware State Department of Public Instruction in Dover. Dr. Kabis told me that Mr. Mitchell has had outstanding success in his work over the past fifteen years at the Center.

Dr. Kabis also referred me to Dr. W. W. Ridell, [8] now a psychologist at the Veterans Administration Hospital in Wilmington, who worked for a time at Governor Bacon Health Center and observed Mr. Mitchell in his work with the emotionally disturbed children. When I posed the question as to whether or not the Tach-X had produced stress in the classes where Dr. Ridell has seen it used, he called it "a ridiculous question," continuing that on the contrary, it definitely relieved stress.

Realizing that stress can stem from faulty physical adjustment, I went to Cornell Medical Center at York Avenue and 68th Street in New York City to get a first hand report from Mrs. Lucille Plaut[9] who direct the Dyslexia Laboratory there, working with the patients of Dr. Edward Dunlap. The students they receive are the worst reading cases. They have failed to be helped by every other known kind of instructional assistance. These people, who may be either children or adults, have serious eye problems of imbalance and focus. Many require surgery. Naturally, they also have serious reading problems. In every case, Mrs. Plaut told me, she first searches for some interest of the patient, and then she selects a filmstrip from the library of the Controlled Reader films. When she projects it on the screen about 9 or 10 feet away, the patient leans back in his chair to read in comfort. "No," Mrs. Plaut said, "the Controlled Reader will not produce stress; it will relieve it." She continued by pointing out that the far-point viewing was much easier for people with eye defects. The patients working with Mrs. Plaut engage in reading sessions with the EDL Controlled Reader three to five time a week for a month or more.

Mrs. Plaut has worked for thirty years with people who have eye and reading problems, beginning her work with the late Dr. Conrad Berens, who was one of the nation's outstanding ophthamologists. She told me of an experiment she tried in 1963 with four students. With the corporation of Mr. "Sherry", Principal of Rumsey Hall in Washington, Connecticut, she took the students there for a period of six weeks during the summer. These were four cases that every one had given up on. Mrs. Plaut gave them three sessions a day on the Controlled Reader. According to scores on standardized reading tests, they made gains up to four years in the six weeks.

Recently, I have been editing reports written by reading teachers across the nation for publication in a new book, **Reading Technology.** I could literally go on for days recounting supportive statements about the use of reading instruments. But perhaps the most convincing evidence I might bring to our attention today is the rapidly increasing use of reading machines in classes over the country, and the fact that the Federal Government has now cited tachistoscopic and Controlled Reader devices in their list of recommended equipment that can be included in the reading programs to be expanded by National Defense Education Act funds.

Educational Developmental Laboratories is only one producer in the field and the one to whose records I have access; yet we alone have placed in use 27,000 Controlled Readers of the various sizes and kinds, 6,500 Tach-X's, and 8,200 Flash-X's, besides other instruments. These are now being used increasingly by responsible teachers who are working to eliminate stress in reading.

There are, of course, some basic reasons underlying this mounting use of reading instruments. Some have already been alluded to, as the comfort and ease of far-point viewing for readers with visual problems of coordination and accommodation. The ocular and perceptual efficiency resulting from training with the Controlled Reader produces increased ease and comfort for the ordinary reader. When eyes are used with fewer movements, there is less expenditure of energy. We have mentioned the appeal of a physical challenge to many students, particularly boys.

The mechanical situation evidently offers more promise for instruction than we have been aware of. Recently, in the **New York Times**[10] an entire page, other than advertising, was given to an account of the rewarding experience Dr. Mary Goodwin has had in working with schizoid children and Dr. O. K. Moore's computerized typewriter for less than a year. These are children for whom even the psychiatrists had lost hope. Now they are communicating with people and learning to read; some are back in school. Dr. Goodwin and her staff guardedly and tentatively attribute the progress to the fact that the machine has removed the human factor in communication.

We do know that the mechanical situation is objective, dependable, non-emotional, and non-personal, providing fairness and equal chance to all. It does not incite anger, and it does not react to anger. While there is no substitute for a kind helpful teacher who is giving full attention to the learner and his problems, there are also helpful things that a machine can do that a human cannot do.

As educators, we may have underestimated the value of the mechanical situation to the multi-faceted endeavor of learning. In such a situation, for instance, the learner assumes far greater control. With control, there is also the opportunity for him to assume more responsibility for his own learning. Assuming responsibility, in turn, adds to the learner's feelings of self-worth.

Since lessons are set up in advance with keys available for checking, usually the learner receives immediate feed-back on his performance. He is constantly measuring up in trial situations. This in itself builds a tolerance of the testing situations which have grown to become major factors in the life of education.

I believe that we can honestly say that all evidence I have been able to find indicates that instrument techniques using appropriate materials, properly applied, have the decided effect of reducing emotional and physical stress and increasing the potential of the student to adjust to the ever-present inherent stresses of learning.

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ARE THERE EFFECTIVE WAYS OF RAISING THE STATUS OF THE COLLEGE READING SPECIALIST?

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Although the specific functions of college reading specialists may vary a great deal from institution to institution, all are expected by their college presidents to do something to enhance students' chances for academic success. The **raison d'etre** of the college reading program is to supplement the academic aims of the institution. Aukerman[1] in a paper read last year at the International Reading Association described the results of a questionnaire he sent to college presidents in which he asked whether they felt the reading program in their college produces significant improvement in academic achievement. 114 out of 138 college presidents whose schools had reading specialists answered "Yes"; however, some qualified their answers by saying they lacked definitive information on the effects of the program.

Since our college administrators have positive attitudes about our capabilities for helping students, it is most important that the college reading program develop objectives consistent with intellectual goals of the institution.

As college enrollments increase, and standards rise, the reading specialist must re-examine his position in the academic community. Unless he is able to grow with the institution, he will fast become expendable. If his services have been limited to remedial work with the most needy, he will soon find himself out of clients unless he meets the needs of both the average and superior students who are entering today.

Does a highly selective institution need a reading program? If enrollment is restricted to the gifted, it may be difficult to justify the need for a reading program. On the one hand, Harvard has had a successful reading program for over 20 years; yet some of our new, ultra-modern universities hold fast to the premise that students who enter their portals should "know how to read." As the high-status institutions continue to limit their enrollment in the face of increasing numbers of applicants, the calibre of students entering our public universities is rising. This results in greater competition, putting the average student at an even greater disadvantage, and in more need of help.

Those of us who work in developmental programs realize that there is no shortage of students who are motivated to improve regardless of how superior their skills may be.

Another dilemma the college reading specialist faces centers around his own attitude toward his position. If he adopts a self-abnegating role and feels inferior to professors in the traditional academic disciplines, he will surely be limited in participating actively in the intellectual affairs of the colleges. If other faculty members perceive the reading program as a kind of wastebasket into which students who are unable to perform adequately in a course are tossed, the reading specialist will have difficulty in working comfortably with the faculty. Also, when academicians merely tolerate the reading program as a temporary measure, expressing the feeling that in the best of all academic worlds, reading and study skills specialists would not be needed, it is difficult to feel that one's position has much status.

About 25% of the college presidents in Aukerman's[2] study expressed the feeling that their faculty ignored the reading program. However, Clay Ketcham[3] in a survey of faculty attitudes toward reading programs found that 94% of her respondents believed that the reading program helped students although her returns may have been limited to those faculty members who had positive attitudes. Nevertheless it is possible for a college faculty to be both helpful and appreciative of the reading program. To achieve this, it is usually necessary for the reading person to take the initiative in developing a positive image. Ketcham[4] suggests that the reading specialist should volunteer to talk to the local AAUP Chapter or faculty club. Getting actively involved in faculty organizations and committees also helps draw attention to your program. Other techniques for building good-will toward the reading program include writing articles for the faculty or alumni bulletins, initiating joint projects with other departments and, most especially, conferring with the individual faculty members who refer students to you.

At the University of Maryland, we have recently instituted several interdepartmental programs. One graduate student serves both the freshman English department and the reading program. She has developed new materials and programs that reflect the English department's objectives to help students improve their writing skills. She also serves as a liaison person communicating the goals and problems of the English department to the Reading Laboratory personnel and similarly educating the English instructors to develop reasonable expectations as to what we can do to help students. Another study involved getting the cooperation of the chemistry instructors who distributed questionnaires to freshman classes. Out of 2,000 students queried, 700 volunteered to spend 10 hours working on study skills related to chemistry, and an experimental group was selected from the volunteers and given a special study skills program.

Our laboratory has had considerable success with another liaison program. A statistics professor in a graduate course tape-recorded all of his lectures in an abbreviated form and encouraged his students to come to the Reading and Study Skills Laboratory and listen to the tapes. Learning programs in statistics were also available for their use. This project was successful, for the professor found that he was able to cover more material in the course, and the students scored higher on the examinations—nine attained a final grade of A, compared with a predicted number of three.

Our laboratory maintains a library of learning programs in different subject areas. Students may use these to review basic concepts or increase their knowledge in a particular subject. Since the published programs vary greatly in quality and content, we have found it best to consult with faculty members in the department concerned to get their recommendations for materials that they feel are consistent with their course objectives.

Having a special program for faculty members who wish to improve their reading rate also builds good-will. In any institution, you will find professors who are motivated to work on such a program. We also have run testing seminars for faculty in which they learn techniques for improving writing examination questions and evaluating their tests. We have found this has a direct effect on their students' study problems.

Holding an Open-House for different departments also serves on introduce new faculty members to your service and gives you a mutual opportunity to learn about each other's work. We hold open-houses for various groups including student leaders, deans, and diverse faculty groups.

In a large institution, the problem of communication between the reading service, the faculty, and the students becomes a difficult one. During the summer orientation for freshmen, we present a tape-recorded color-slide description of the reading services. Also, announcements and feature stories are placed in the student newspaper. This year pictures of our service were placed in the Yearbook for the first time. Announcements about aspects of our program are posted on campus bulletin boards and in dormitories. Announcements are sent to student leaders, undergraduate scholarship chairmen, residence staff as well as faculty members. The Reading Laboratory staff offers to present talks for student groups or faculty.

Follow-up questionnaries sent both to student and faculty can aid in public relations aspects of the reading program, provided they are well constructed and brief. In our larger institutions, students seem to appreciate being asked their views about the program and are willing to give frank response. We compile mailing lists of all students who enter the program by having each fill out a self-addressed envelope when he enters the program.

It is possible for the college reading specialist to improve his status and become an integral part of his academic community. He needs an awareness of the merit of his function, the enthusiasm to convince both students and faculty of the importance of his program and the flexibility to adjust to both the changing needs of students and the intellectual goals of his college.

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MY EXPERIENCES WITH A SUCCESSFUL HIGH SCHOOL DEVELOPMENTAL READING PROGRAM

Sally C. Berkey

Centinela Valley Union High School District

The most challenging and rewarding experiences I have had during my educational career have been in the field of reading. I must say that it gives me a great deal of pride and pleasure to have the opportunity to discuss with you the experiences I have encountered in a reading program which I feel has been successful, – namely the Reading and Study Skills Program of Centinela Valley Union High School District.

Having served as reading coordinator in this district for six years, I would like to describe to you our program, developmental in nature, from its inception to the present time.

Centinela Valley Union High School District, located in Southwest Los Angeles, is made up of four high schools, which have a total enrollment of approximately six thousand students. This district, under the *direction of Dr. Jefferson L. Garner, began its reading program in September, 1959.*

For several years prior to this date Superintendent Garner, as well as his administrators and teachers, became increasingly concerned with the reading problem throughout the district. Since standardized reading tests indicated that a large percent of our students were not reading up to expectancy, necessary steps were taken to set up a reading program in each of the four high schools.

After getting board approval for such a program, the administration then concerned itself with selecting competent personnel. Dr. Garner's first move was to hire two reading coordinators, or specialists. They were given the responsibility of setting up the reading program, developing the course of study, selecting and ordering the materials and equipment, setting up the labs, training new teachers, and supervising the over-all program in their respective schools.

Four special reading lab teachers, one for each of the high schools, were hired to work under the supervision of the two coordinators. These lab teachers were instructed to work with and help the reading teachers in their respective schools and to conduct the reading program according to plans.

The district also encouraged its English teachers who were to be involved in the reading program to take a summer course in developmental reading – with all expenses paid. Approximately twenty teachers, being fully aware that reading is the most important tool in the learning process, availed themselves of this opportunity.

The mechanical instruments in each lab consist of the following: one tachistoscope, one controlled reader, one tachist-o-flasher, several S.R.A. reading accelerators, several shadowscopes, several ear phone systems and one tape recorder. Graded film and tape are available for these instruments.

There is a great variety of reading materials in each lab. Carefully selected for interest as well as instructional level, these materials range from grade two through fourteen.

Concentrated in the freshman English classes, the developmental reading program is a required course. It is mandatory for every ninth grade student in the district to spend eight weeks of the school year in the reading lab. (Those students in special reading classes are not included.)

Generally, the Reading and Study Skills Program was planned to help the students improve their reading habits and their study skills, two of the most important areas of the high school curriculum. Five major tasks confront each teacher in helping his students accomplish these goals. Those tasks are as follows: (1) the development and refinement of reading techniques and skills, (2) the development of vocabulary and background concepts, (3) the development of reading interests and tastes, (4) the development of independence in reading, and (5) the development of differential attack – ability to adjust reading skills at hand. The teacher makes every effort to consider the individual needs. He starts each student at his present reading level and encourages him to work up to his potential.

Before our students begin their training in the reading lab, they go through a period of motivation and orientation. The students visit the reading labs and become acquainted with the over-all program. They also visit the library and receive instruction in its use.

During this period the students are also made to realize the importance of general health and its relation to reading. The school nurse gives a physical check-up to all students, carefully examining their ears and eyes for every possible defect.

This period of motivation and orientation is of paramount importance. It is during this time that the students begin to realize that reading is basic to all subjects and that all students, regardless of their reading levels, can learn to improve their reading skills and techniques.

The testing program also serves as a part of motivation. It is pointed out to the students that tests are given for their benefit, in order that they may know just where their strengths and weaknesses lie. The **Nelson Silent Reading Test,** Form A, is given to the students before they begin their lab training. Form B of the same test is given at the end of the lab session to see how much progress is made during the training period. Form C of the **Nelson Test** is given at the close of the school year to determine how much carry-over there is and how much achievement is made during the entire year.

When the students are thoroughly motivated and are ready to go into the reading lab for their training, the class of thirty, which is homogeneously grouped for English I, is divided in half. The regular English teacher takes fifteen of these students into one of the two reading labs, and the special reading teacher takes fifteen in the other. For a period of eight weeks these students follow a concentrated program of reading skills, techniques and study aids, as outlined above. They keep a record of their work and chart their progress on a form specifically developed for use in the course. At the end of the lab session, the students receive the results of the B test, and their over-all performance is discussed with them.

The follow-up phase of the reading program is perhaps one of the most important parts of the course. The students return to their regular English classes, and for the remainder of the year they spend at least one day each week in supervised classroom reading. During this time, they put into practice the reading skills and techniques which they learned in the lab. For this important follow-up procedure, special materials and aids are available for the classroom teacher to use.

Working closely with the freshman English teachers and the reading lab teachers in both the lab program and the follow-up procedure is the school librarian. In addition to instructing the students in the normal use of library materials, the librarian is always ready to guide the students in independent reading for both recreational and research purposes.

As was stated earlier in this article, three forms of the **Nelson Silent Reading Test** are given to all ninth graderers. The improvement made by our first semester students during the school year 1963-1964 indicates that the reading program has merit. The average reading level of our students at the beginning of the program was eighth grade, one month (8.1). The average reading level at the end of the lab session was ninth grade (9.0). This makes a total gain of nine (9) months in eight weeks, more than one month for each week of instruction. At the end of the school year, after the students had gone through their follow-up program, the average reading level was ninth grade, seven months (9.7), a gain of seven months (.7) since the lab period. These figures show that an over-all increase of one year and six months (1.6) was made during the school year. These gains are typical of the growth throughout the six year period.

Significant also is the fact that the majority of our students make many gains which cannot be measured statistically. The strength of the total program is mirrored in the students themselves. Along with their appreciable improvement in reading, our students gain a feeling of self-confidence. They develop socially as well as educationally. Many students, for the first time, begin checking books out of the classroom and school libraries. Almost all of our students seem to have a more favorable attitude toward reading and toward school in general.

The Reading and Study Skills Program has a much broader aspect than that which is outlined above. A follow-up of the basic reading skills learned in the ninth grade is emphasized especially in the average and below average classes in grades ten, eleven and twelve. In the college prep classes, reading enrichment is a major part of the curriculum. Special classes for the improvement of speed and comprehension are provided where needed. There is special emphasis given to critical and interpretive reading as well as to the building of a larger vocabulary. Included also for the college bound students are the normal depth studies in short stories, poetry, essays, novels, dramas, epics, and biographies. This reenforcement, or follow-up, in the upper grades provides a continuous process of reading improvement from grade nine through twelve.

Reading in the content area is also a part of our school-wide plan. During the past five years we have had reading committees made up of interested teachers from each department. These teachers have worked together, trying to find ways and means of improving reading in each subject field. This procedure has proved to be very effective in that it has made the majority of our teachers realize that the teaching of reading in their subjects is their responsibility.

During the current school year, we have organized a reading council, comprised of both teachers and administrators. This council is concerned not only with the many reading problems existing throughout our entire school but also with the refinement and enrichment of the reading process for all students. The Reading Council is proving to be a valuable organization and will probably remain as a definite part of the school's permanent structure.

Small group counseling has also become a part of the school-wide reading program. Three periods a week have been set aside for this purpose. During this time small groups of students with common problems are counseled. Clinical help is being provided for our non-readers or for our students who have extremely serious reading difficulties.

As a result of all of these efforts, a reading atmosphere has permeated the entire school district, and the reading program is an important part of the over-all curriculum.

EXPERIENCES WITH A SUCCESSFUL HIGH SCHOOL DEVELOPMENTAL READING PROGRAM

Eileen Sargent
Milwaukee Public Schools

"Interest begins with the teacher." [1] Actually this statement was referring to reading interests as such, but in our experience we feel that the interest of a teacher in all aspects of reading is of prime importance. It is unrealistic to expect interest from people who are not involved in some phase of a program or project which is being developed. It may be true, but I doubt it, that progress is slower and there are more problems by including an entire staff at the outset. Success fosters more success and I believe that interest is contagious and fosters more interest. Those teachers who for various reasons are reluctant participants are swept along by the enthusiasm of the majority and soon find that they can receive help, information, and moral support from their colleagues.

The students at Nicolet High are good average readers attested to by a median score over the years, of incoming 9th grade students ranging from 9.2 to 9.6 on the Step Reading Tests. This evidence indicated that to serve the majority of students a so-called developmental program would be most feasible wherein reading study skills would be a basic part of the curriculum in each subject. Because a large number of students continue their education, provision was made for the superior junior and senior to elect to enroll in a College Reading Class. Since that time, a reading laboratory has been added whereby the student who is seriously retarded can be helped either individually or in small groups.

In initiating a new program, it is imperative that everyone be aware of the purposes and have an understanding of what is to be accomplished. It is no easier nor efficient to instruct and orient a large group of teachers than to instruct a large class of students with diverse backgrounds and abilities. Therefore, one individual from each subject area in the school was selected to serve on a committee, which was called the "All School Reading Committee" (A.S.R.C.).[2] This committee met with the Reading Consultant twice a month to become acquainted with the theory of reading, reading skills and all other phases of reading as they related to our school situation. These individuals, in turn, met with their departments and oriented their members with this information as it pertained to their subject. Questions and problems of the departments were brought back to the A.S.R.C. for clarification or the reading consultant met with the department at one of their meetings.

A workshop was held the following summer in which each member of the A.S.R.C. participated. The purpose of the workshop was to develop and provide lesson plans, ideas, and suggestions by which the reading skills could be presented to the students. Other information presented at the workshop included a school philosophy, general information on reading, characteristics of good readers and symptoms to be observed in identifying a problem reader.

One whole day of the pre-school workshop in the fall was devoted to the launching of our reading program. While our method of introducing our reading program to the students may seem rigid, everyone agreed that it was a good idea and it worked remarkably well. All teachers in all classes presented textbooks to their students the first day and proceeded to instruct them in the proper use of them in their particular class. Periodic instruction and review of this initial step continued as other phases of the program were introduced.

Next, vocabulary was emphasized by each teacher in each subject in whatever fashion he wished. Four weeks elapsed before a new skill was introduced. At no time did the teachers announce that we were working on a reading program; however, it soon became apparent to the students that a skills program was a part of the basic curriculum in each subject.

The rest is history. Success fosters success and interest fosters more interest. Cooperative planning and initiating of the program were prime factors in the success of the program.

There had been a fair turn-over of personnel in the social studies department and it was felt that some in-service work would be profitable. Again stress was placed upon the reading skills which would be applicable in social studies reading and studying, as well as the types of questions to be asked to provoke critical thinking and evaluation.

A few years ago, members of the biology department wanted to engage in some research to prove that the teaching of reading study skills was valuable. One semester was spent in designing the study and doing some preliminary planning. The next semester a pilot study was run to "get rid of the bugs" and the following semester a control and experimental study was set up with four classes in biology. The problem was basically one of determining the effectiveness of the teaching of vocabulary.

In two classes, the students were taught vocabulary in the same manner as all good teachers do. The words to be learned were called to the attention of the students, meanings looked up in dictionaries, discussed, used in sentences and listed in a vocabulary notebook. Weekly quizzes helped determine achievement.

In the other two classes, the students were first presented a basic list of affixes and roots. The same words were presented to these students, but they were taught through word analysis to determine meanings as indicated by the affix and root chart. These students kept a list of their words in a vocabulary notebook and weekly quizzes helped determine achievement in these groups, too.

At the end of the semester and after semester exams, it was found that the experimental group did 17% better on the semester final, did even better than that on the vocabulary tests and were better able to determine meanings of unknown words than their matched counter parts. [3]

Our biology teachers are a curious group and are delving into numerous action research projects in the realm of reading. At the present time, they are concerned about the reading level of their new textbooks and have asked to have a Dale Chall Readability test done on them.

In making preparation for our summer school offerings, several math teachers are proposing new courses to be developed on an experimental basis; one, more reading oriented than the others which I would like to describe briefly, is, "Effective Reading and Solving of Math Problems." The course of study is not completed as yet, but some of the things which will be included are a thorough study of all prefixes utilized in mathematical terms; an emphasis on gaining a real understanding of mathematics vocabulary; the development of steps to follow in reading a math problem; steps to follow in solving various kinds of problems and an awareness of how to determine the relationships within a problem as concerns the information given to solve a problem. Next fall a control and experimental study will be set up to determine the value of the new procedure in problem solving.

The ninth grade English teachers who are already doing a great job of teaching the various reading skills applicable to their subject area felt that they could do even more. They are going to spend two weeks right after school is out, developing some reading units which can be incorporated in the English curriculum. In order for a secondary school to have a successful reading program, I feel that several necessary ingredients are imperative. First, the administrators, superintendent and principal must be cooperative, supportive, and intelligent in the area of reading. Secondly, a well-qualified, certified reading consultant should be in charge of the reading program, and have authority to initiate necessary changes. Third, in order to have an adequate program, one which meets the needs of all students, you need to provide a developmental program of skills incorporated in all subject areas and administered by all teachers, a corrective or remedial program for the seriously retarded student and advanced or accelerated reading classes for the above average student.

I would like to see colleges and universities provide workshops for administrators, in which they could be made aware of what to expect from a good reading program in their high school. It is unbelieveable that good administrators have so little knowledge in this area.

There is no limit to the degree of satisfaction and amount of achievement gained as the result of a good program. It is most gratifying to hear students and teachers extoll the virtues and merits of such a program—gratifying enough to make you forget the cries of anguish that occurred as changes were taking place.

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DEVELOPING BETTER READERS OF THE BETTER NEWSPAPERS

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For almost two decades the students in my high school English classes have been learning how to read newspapers. "How well? With what results?" Well, let's ask the students, for one of the best ways to evaluate a unit is through their reactions and thinking.

> "Out of the whole newspaper I used to scan the headlines and read the comic strips. Now I take a greater interest in reading almost the whole paper." Barbara B.
>
> "Through this period of study of the newspaper I learned how to get the most out of the newspaper, how to read different types of articles, news stories, the lead paragraph, and also human interest stories." John E.

Further perusing what all these many students, some 1500-1700, think about newspaper reading after they have had some classroom experience and help, we see certain ideas and values emerge.

(1) Students can become better readers of the better newspapers. (2) They do learn how to judge a newspaper based on class-established criteria of merit. (3) Many become wider readers and encompass the whole newspaper. (4) They will look to editorials and columns for aid in forming their own opinions and in doing their own thinking. (5) Freedom of the press has a new meaning to many. (6) Some learn they ought to read several newspapers for breadth of view. (7) All can learn to read the advertisements for good buys and their own protection. (8) They realize the public has to know, must be informed — in a democracy.

Now any evaluation leads us directly to what we as teachers are trying to do in the classroom. We cannot judge or evaluate any educational program unless its aims and objectives are known. This brings us to the Why of newspaper reading.

In terms of the student's own aim, he is trying to become a better newspaper reader. The objectives for the student would be as follows: to be well-informed, to form intelligent opinions, and to get pleasure.

In terms of the teacher, the educational rationale goes something like this. Basic to any democracy is an intelligent and well-informed citizenry. Reading the newspaper is one of the best ways to get the information necessary for responsible citizenship. As of now, the students are not wide, deep, and discerning readers of newspapers. They need help to become better readers. And what furnishes strong motivation is the fact that students themselves realize they need aid in this important task. To fulfill its obligation to democracy and to the individuals under its guidance, the school must help pupils become mature, effective, and intelligent readers of better newspapers.

In preparing a class for a newspaper unit, the readiness program should include a discussion of the above reasons with the students and a canvass of their ideas and reasons. And then it would be profitable to do a re-cap. The fundamental point of view is as follows: reading the newspaper, not writing it; consuming the news, not producing it; developing the skills, habits, and abilities needed by all readers, not just the few who might become contributors to newspapers. This is not a journalism unit for the few. All the pupils are to learn to READ the newspaper.

After the Why, and because of it, comes the What and then the most important of all, the How. The What is composed fundamentally of four aspects represented in the following outline.

(1) What do the students now read? Which newspapers? What sections?
(2) What is in a newspaper?
(3) How is the content gathered?
(4) How is the material processed and printed?

From this What, you and your students just naturally glide right into the How. You already have a few questions and some curiosity aroused; you now need but foster the latter. From the students you are likely to get the following questions. What is a newspaper supposed to do? How do you judge a newspaper? The differences between a Sunday and week-day paper? What are the skills needed in reading a newspaper? How do you read the advertisements? Outstanding features of particular newspapers? Location of the most important news? These questions should be recorded, by the teacher on the chalkboard and by the students in their loose-leaf notebooks.

There is your "Course of Study". Begin at any point – begin with a question of great interest and common to most members of the class. For instance, what makes a good newspaper good? How do you judge a newspaper? What are suitable and fair criteria? Let the class discuss this to their hearts' content and their minds' exhaustion, and then you as the leader of the group's thinking must fill in the missing parts.

Begin with a current news story: a big sports story, a "march," a crisis in government – here or abroad, a strike, an earth's orbit. Let the class make a comparison of the coverage of that piece of news by using two or three newspapers. It is always more revealing if the wire-services are not used.

One of my own favorite ways of beginning is with Advertisements – their meaning and interpretation. Our interest is in getting our money's worth and recognizing a bargain. Our interest is three-fold: consumer education viewpoint, the language usage and semantics aspects, and the psychology used by the ad writers. We try to learn how to discount their claims and how to evaluate them. We like the intellectual contest, the mental gymnastics of this "tug of war"; we like trying to out-think the "gray-flannels" – not always with complete, nor even any, success. But it is FUN, and it pays off – sometimes.

Begin anywhere you and the class decide – but begin with a bang! A jet-like start is very important in and of itself, but you want to be very sure the class is interested and winging its way to profitable and pleasurable newspaper reading. Then you can take the time to pause long enough to set up some objectives for your unit. This, too, is a class enterprise. Among others these seven specific objectives should be included.

(1) Set up standards for judging newspapers (2) Selecting good newspapers (3) Read the better newspapers efficiently and intelligently (4) Discriminate between an impartial and biased presentation of the news (5) Understand the relative values of the various news stories (6) Seek for and depend upon reliable news sources and services (7) Read the newspapers with discrimination.

Discuss with your students what in their opinion should be published and what should not – and why. Consider the slogans and credos of various newspapers all across America. From the New York Times with its "All the News That Is Fit to Print" to the San Francisco Examiner's "Truth – Justice – Public Service".

There are many more aspects to newspaper reading. The Press Services – A.P., U.P., I.N.S., Reuters – these furnish ample material for a special study of their comparative coverages, reliability, and so forth. How does a reader handle the problem of propaganda, slanted news, name-calling, innuendo, and political bias which may be encountered in newspapers? The student must be taught that different styles of writing call for different skills and abilities in reading. News stories, editorials, sports pages, human interest and feature stories, a short short story or a novel in serial form, the columns of various writers – all these call for adjustments by the readers to fit the writing.

Here is something good for a lively discussion. What about the comics? What makes for a good comic strip? A poor one? Why? Should the comics do more than amuse? What? Are comic strips in direct or indirect proportion to the recognized standing of the newspaper as a purveyor of news? Be prepared – and forearmed!

And do you want a "toughie"? Try teaching (and learning some more about) how NOT to make up your mind until all the evidence is in and is studied carefully. Here would be a good place to teach the significance of not overlooking such words as "alleged", "perhaps", and "a source usually reliable." It will take plenty of patience and friendly persuasion, plus as many current examples as can be found. It will not be easy – for either the teacher or for those students who represent the impatient, black-or-white thinking.

This, then, is one approach leading to better newspaper reading. It is the beginning but only the beginning, for the path leads onward and upward and the end is not immediately in sight. For further development, the student must practice in and out of class and under the teacher's guidance and coaching. Both of these must be particularized and individualized, particularized in terms of the areas of newspaper reading and individualized in terms of the persons. How much of the news is known, how well is it understood, and can it be interpreted as to its significance? There must be discussion – much discussion – of what has been read. There must be plenty of time to secure student opinions and evaluations of the news. Everybody can improve in the reading of newspapers by reading them.

PHYSIOLOGICAL AND PSYCHOLOGICAL EVENTS: THEIR RELATIONSHIP

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Are physiological and psychological events related? "Of course!" you would say and so would biologists and psychologists. A few of them would modify their answers: "Some physiological events are related to some psychological events. More than this we cannot say." Others might recommend a more specific formulation of the question: "What is the relationship between physiological event A (for example, a rise in blood sugar) and psychological event A[1] (for example, a shift in attention toward a difficult task, previously ignored)?" Or, more specifically still, "Under what conditions is psychological event B[1] (panic during an examination) likely to be accompanied by physiological event B (the secretion of epinephrine)?"

Most specific of all is the causal form of the question: "Which event is the stimulus for the other – does the psychological event (exam panic) cause the physiological event (secretion of epinephrine), or vice versa, does the secretion of epinephrine cause the event described as panic?"

I will take the position that scientific statements within a discipline are limited to the language of that discipline. That is, one cannot deduce a valid statement from the theories of one discipline if that statement includes a term or terms derived solely from the theories of another discipline. Thus, the question "Which causes which?" across disciplines becomes a non-scientific question which must, necessarily, receive a non-scientific answer.

To defend the position, I will describe a specific problem in the psychology of reading, illustrate the obscurity of writings about such questions, and, finally, suggest alternative questions.

Emotionality and Reading Achievement

The cause-effect question is reminiscent of a controversy waged during the 1940's by reading specialists: Are emotionality and reading achievement related? The question most often asked was, which causes which? Does failure in reading cause anxiety or does anxiety cause reading failure? Common answers offered in the 40's were of two sorts:

> General — Sometimes failure causes anxiety and sometimes anxiety causes failure.
> Specific — Research shows that in 35% of the cases, anxiety causes reading failure; in 44%, failure causes anxiety; in the middle group the initial cause cannot be determined.

Such answers sound more like opinions than like scientific statements. So also do attempts to specify such relationships in other spheres.

The following excerpts are found in an excellent little book on child development.[1] The selection of this passage to illustrate a point is not meant as a criticism of the book generally. Rather, its obscurity reflects the state of our science.

> The fact that psychological and organismic [physiological] events take place at the same time does not mean that one class of events exclusively causes the other, that is, that organismic variables always cause psychological reactions, or vice versa. . . . Of course, organismic variables often do participate in determining psychological reactions just as psychological events often participate in producing organismic responses (e. g., psychosomatic medicine).

These statements need clarification. To begin, if two events occur at the same time, one cannot determine the other. Now, let's consider a client, a child examined by a physician, a psychologist and a teacher:

> The teacher says: This boy is reading two years below his potential. His sight vocabulary is five months below, and his sentence comprehension is two years and five months below. He reads very slowly. Often he perseverates on an activity and appears not to hear me. Sometimes he is sullen; at other times he shows infantile dependency.
> The psychologist reports: This boy of Stanford Binet IQ 96, has been encopretic (soiling) since age six, usually after his parents' divorce. His mother, an alcoholic, had been declared unfit, with custody awarded to the father. His encopresis has not been alleviated during two years of psychotherapy. He is passive-aggressive manipulative, with periods of clinging, intrusive behavior. He apparently alternates between anger and fear of the consequences of anger.
> The physician reports: General health good. Slight anemia. Encopretic except during brief periods when threatened by step-mother at which times he becomes constipated.

A systems theoretical view of this child suggests questions different from those we have posed earlier. To solve this problem, we may not need to ask, "Did the early history cause the reading problem?" We might state simply that encopresis, anemia, anger, manipulative behavior, perseveration and low reading comprehension are terms used in describing the child as a system by workers in various disciplines.

The question to be asked is, "Are my techniques adequate for helping him adjust?" If they are, the appearance of this child to workers in each discipline will inevitably change. For example, the child treated with Dexamil appears less neurotic and achieves academically. The child in successful psychotherapy has better eating and sleeping habits and achieves academically. The child who overcomes academic handicaps subsequently has better eating and sleeping habits and appears less neurotic. For, after all, the child, as system, is unaware of scientific disciplines.

The organism may be viewed as ". . . a hierarchy of levels of systems . . ."[2] The cell constitutes a system with parts or subsystems. Tissues are composed of cells, and organs are composed of tissues. Groups of organs, some with and some without structural connectors, constitute larger systems, circulatory, nervous and endocrine. The individual, within this view, is at the same time a system and subsystem within a larger one, for example, the family, the gang or the classroom, all of which constitute supersystems.

Once more from the systems view: to say that an individual responds to an event is to say that the individual, as seen from all points of view, is responding to that event; therefore the event will have consequences at every level. Thus, a loud noise is responded to psychologically by a startle, perceptually by increased alertness and a search for the stimulus, and physiologically by pupil dilation, vaso-constriction, decreased peristalsis, increased pulse secretion of epinephrine, and so forth. Furthermore, continuous stress such as that produced by adult verbal manipulation of a child, will be accompanied by continuing fluctuations in hypothalamic and endocrine activity, experienced as fear and anger.

Thus far, we have considered illustrations of the contention that events occurring simultaneously cannot be said to cause one another. Might we then say that causation may be inferred when two events always occur in sequence. The answer is yes, if terms representing the events derive from the same discipline. Let me explain.

When we ask a cross-discipline question such as "Does a rise in blood sugar cause a change in attention?" it would be useful to recognize that we are dealing with two dimensions, levels of functioning (blood sugar and attention) ard sequence in time of two events. We might better ask, "Is a rise in blood glucose followed by a change in brain glucose?" (One dimension, two time steps). Then we might ask, "Is a feeling of surgency followed by a change in attention?" (One dimension, two time steps).

Problems arise in cross-discipline questions when we change levels of functioning, and time steps in the same query. To return to our boy: fear, secretion of epinephrine, innervation of sphincter muscles (in both the iris and the digestive tract), and the perceptual behaviors inferred from his reading are concurrent actions of the same system. We observe one event in the physiological realm at time 1, another event in pedagogical realm at time 2, and incorrectly attribute to one the role of cause and to the other the role of effect. If secretion of epinephrine and pupil dilation occur together and both precede oral reading errors, why not ask, "Does pupil dilation cause reading problems?" We do not ask that question, if we have learned our lesson, for the reason that it is a non-scientific question. It might be useful to ask, on the other hand, "Does the word constitute a different stimulus during oral reading from that observed during silent reading?" Since the phenomenal stimulus can be inferred from a response made in the presence of it, the question may be restated as follows: "Is the accuracy of a response to a word in an oral reading situation different from the accuracy of a response to that word in a silent reading situation?"

That may dispose of the question, "Does anxiety cause reading problems?" The next question to be attacked is the other half: "Do reading problems cause anxiety?" Here we must digress into discrimination learning. Organisms, when placed in a novel environment, exhibit "emotional" behavior. Such behaviors may be either diffuse, non-specific, even hyperactive, or they may be catatonic-like: the organism may remain immobile for a time before venturing out to explore the environment. The exploratory period appears to entail discrimination of the parts of the surround. Each part becomes an entity as a result of its consequences. The consequence of each discrimination may be viewed as a reduction in fear, tension or uncertainty. The process is called habituation.

Within the educational environment, the first discrimination task is that of habituation to the room, to the teacher and to the other children. The second task is the discrimination and naming of letters, words, numbers, and other symbols. Failure in these discriminations leaves the learner in his original state of emotionality i.e., uncertainty. Each time he is faced with print, he "becomes emotional," i.e., he has yet to learn the necessary tension-reducing response. In brief, he has not habituated to the page. He may, in fact, find that looking away from the page to familiar objects (like the window) is tension-reducing and thus learn to withdraw from print. We may now restate the question of whether reading problems cause anxiety as follows: Is failure to name a word followed by an increase in uncertainty? Certainty may be defined as the degree of accuracy in predicting the next word in an utterance.

Implications of a Systems View

If the foregoing systems view of behavior is correct, certain intriguing possibilities result. There is evidence that the use of meprobamate has consequences which may be observed in perceptual behaviors as well as in muscle tonus and in reports of increased well-being. Does it not follow that whatever produces a change in perceptual behavior will have consequences throughout the system observed in other changes, including reduced muscle tonus and reports of well-being? In more common terms, will an increase in perceptual skills be accompanied by a report of increased psychological comfort?

Furthermore, will a change in the larger system, say, the classroom, be reflected in a change in the individual? More specifically, if the uncertainty attributable to classroom variables can be decreased, will the child exhibit less uncertainty in his behavior, more consistency in his perceptual behavior, and increased reading skill?

Research at Michigan over the past two years has been directed to these questions.

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READING IMPROVEMENT AND ACHIEVEMENT IN COLLEGE

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From 1930 to 1934 six pioneer studies of the relationship between reading improvement and college achievement appeared in five of the leading educational publications.[1] In spite of marked differences in experimental design, all of these reports concluded that reading training improved scholastic performance.

Since that time several dozen other distinguished educational researchers have chosen to study the problem. The consensus of their findings is also that reading training contributes to academic success.

Since the question which was answered tentatively over thirty years ago has been probed almost continuously since that time by competent researchers, can't it now be laid to rest? Perhaps not, for it appears that this persistence is a tribute to the importance of the problem, its extreme complexity, the productiveness of the research completed, and the promise that further information might be obtained from continued effort.

In order to make a more direct contribution to the academic success of our students we must first learn more about the relationship between reading training and scholastic achievement, and then determine how this information might be used to improve future practices. These two related topics establish the framework for this report.

What Have We Learned?

Does reading improvement increase academic success? In the recent professional literature thirty-eight studies were located which were designed to consider this question. Of these thirty-eight only twenty-four employed some form of experimental control, a condition considered essential to the validity of the conclusions drawn. This summary, then, will encompass only the twenty-four controlled studies. Of these, eighteen concluded that reading training did contribute significantly to scholastic success, while six found no significant relatonship.

Naturally a majority is not of itself sufficient to warrant any final conclusions if the studies were poorly conceived or executed. However, this is not the case. The bulk of the studies were well designed. Some employed highly creative means for overcoming the many obstacles met. Their results were derived from a number of different programs and the findings were subjected to statistical tests. In all fairness it must be mentioned that a couple of the studies which found negative or non-significant results were equal in soundness of design to the best studies in the group.

It does not seem unreasonable in light of available evidence and in spite of some well-based dissent to conclude in general terms that reading training can make a significant contribution to academic achievement. But isn't this the same conclusion we could have made on the basis of evidence available over thirty years ago? Perhaps it is. What, then, has been the contribution of the many subsequent studies? The answer to this question is that later studies have suggested more specific, and hence more useful, findings. For example, each study has been a test of a specific program, conducted by specific individuals using specific materials and devices under an organization and administration perhaps unique. No doubt some programs have withstood the scrutiny better than others. It would be illogical to assume otherwise.

Several other conclusions have been suggested. Since some of these conclusions are still tentative, it would be well to seek further confirmation of them. They may be enumerated as follows:

1. Reading training appears to be of greater benefit to students pursuing curricula of a **verbal** nature (humanities, social sciences, etc.) than to students largely concerned with **quantitative** studies (science, math, etc.).[2]
2. Achievement in a college reading improvement situation is related to the motivation or "need achievement" of the subject.[3]
3. Reading training reduces dropout rate and improves performance of probationary students.[4]
4. Reading classes appear to be more beneficial for men than for women.[5]
5. Poor readers are benefited more by reading training than are good readers.[6]
6. Students with low aptitude, as indicated by the SAT-V score, make the greatest gains in reading improvement courses.[7]
7. Reading training is of particular benefit to students with high intellectual capacity and low reading ability.[8]
8. To benefit scholastically from a reading program students must recognize their own need for training.[9]
9. Gains in reading skills are not related to academic achievement or gains in academic achievement; but variables other than reading ability are affected by a college reading program, and these variables result in superior academic achievement.[10]

If the answer to our basic question is not as clearcut as we might desire, we must study the effects of known variables and attempt to discover still unknown sources of variation. For example, we know quite a bit about how emotional and personality factors affect student performance in a reading program, but as yet we have little definite evidence as to how such factors contribute or fail to contribute to academic achievement following the instruction. Furthermore we have no evidence to state with assurance how long a course of training should be, nor do we know for certain what kinds of materials should be used, how the course should be organized, or what effect the experience and competence of the instructor have on the long range outcomes. When such complexities have been resolved, and only then, will the reading specialist be able to make a more direct and measurable contribution to the academic success of his students. Until such a time we must be content in the knowledge that we are helping certain students to find their way through the academic jungle.

How Can We Make A More Direct Contribution?

What do we as reading teachers need to do to further our understanding of the role we play in scholastic achievement, and how do we enhance our effectiveness of this role? Several means seem to be suggested by the preceding discussion.

First, each reading teacher must assume responsibility for assessing his own program. Variables between programs are likely to be found to be as significant as variables common to all programs. Only by the individual evaluation of each program can this be ascertained. Such evaluations must concern themselves with the long range as well as the short term effects of the program. Longitudinal studies of former students in reading improvement courses and clinics need to be made. Programs which "prove out" under carefully controlled scrutiny must then be described in detail in the professional literature for the purpose of upgrading general practice.

A second step will be to improve experimental design. As a minimum each study should meet the following criteria: 1. It must employ a control group derived from the same population of students as the experimental group; 2. Random selection must determine the composition of both the experimental and control groups; 3. A statistical treatment appropriate to the experimental design must be applied to the experimental results. In addition to these basic criteria for research design, it would also be helpful to try to develop new and creative ways to solve the numerous complexities of the experimental problem.

The third step relates not only to the design of research studies but to the objectives of the studies as well. We must continue to seek answers to the more specific questions arising from earlier research. For example, in the Bloomer study cited above, the reading improvement work was found to have made a significant contribution to the grade-point averages of the students involved. However, and this is the important point, Bloomer also found that ". . . gains in reading skills were not related to academic achievement of gains in academic achievement." He went on further to conclude that ". . . variables other than reading ability are affected by a college reading program, and these variables result in superior academic achievement."[11] It is obvious that the research problem will never be completely solved until these variables, if indeed they do exist, have been isolated.

As a fourth step we must seek to employ the best of current practice in diagnosis and instruction at the same time we attempt to improve these practices. This means using diagnostic instruments now available and developing new instruments to further refine our understanding of the constellation of reading abilities, or inabilities, possessed by each student. Perhaps our failure to be uniformly helpful to our students can be explained by our corresponding failure to handle our students individually on the basis of a complete diagnosis. Also, experimentation must continue with promising methods. For example, how effective is the "cloze procedure" in improving comprehension,[12] or can oral reading be used to increase understanding?[13] Or since Holmes[14] isolated the considerable relationship of vocabulary skills to reading power, how can we best contribute to vocabulary growth in our students?

Fifth, we must somehow attempt to bring about a higher correlation between short term and long term effects of reading training. An examination of individual results reveals many students who make outstanding gains in reading performance yet whose academic record remains unimproved.

Sixth, we must use our influence on our campuses to make certain that no forces are set in motion which would tend to undermine the central role which reading plays in education. We, as reading teachers, are naturally convinced that reading is the best of all possible educational tools and are dedicated to its full and appropriate use. If one is inclined to doubt that forces unfriendly to reading are in evidence, one need only look at the results of the Burns study[15] recently made at Michigan State University. Burns concluded that ". . . some apparently successful college students have an inadequate conception of the reading process and its potential for learning, have poor reading habits, and avoid reading as much as possible." She continues, "Something is obviously lacking in the academic milieu when students deny that they read, express dislike of reading, and state that it is unimportant or unnecessary." To combat this attitude, we reading teachers must take on a new and unaccustomed role. We must see that reading retains its premier educational position.

The seventh and final step is perhaps most important. In addition to continuing our individual research efforts, we must plan a cooperative approach to the problem. We must enlist the aid of representatives from as many different college programs as possible to plan a comparative study of the effectiveness, both short term and long term, of college reading programs.

It appears then that if we assume as a legitimate part of our function the improvement of academic success, we have three main tasks before us. First, we must continue to study the problem, ever seeking more specific and reliable information through carefully designed studies. Second, we must continue to upgrade our practices in diagnosis and instruction. Third, we must work to keep reading at the heart of the educational structure. Only then will we be able to face our students secure in the knowledge that we can make a direct and measurable contribution to their academic success.

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READING IMPROVEMENT AND ACHIEVEMENT IN COLLEGE

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The mere mention of the fact that a college or university offers a course in reading improvement or anything related to it will bring several criticisms from many sources especially the old guard representing the traditional liberal arts group. The fact of the matter is, it is not one particular group who oppose a college reading program but only a scattered few who refuse to face facts. Let us, for a moment, take a careful look at the situation and then see why colleges throughout the country have seen fit to include reading improvement programs as part of their regular offerings for some students and have made it a requirement for others.

1. Each year the college board examinations are revised and carefully analyzed with the one purpose to identify the best human resources to be admitted to our colleges.
2. Because of the increased demand for higher education and the high costs involved in providing this education, colleges have by necessity been forced to be more selective.
3. To include a reading program as part of the regular college offerings demands additional staff, space, equipment, materials and time. In the light of these factors it adds up to only one thing: increased cost for the college.
4. Each year we find an additional number of colleges adding a reading program to their offerings.
5. Each year universities who are training teachers to work with college students in the area of reading are finding an increased demand for their graduates.

At the December meeting of the New England Association of English Teachers, at the Harvard Club in Boston, the featured speaker Dr. Noyes, of the College Entrance Examination Board indicated that the English section of the examinations would be revised in the direction of expecting high school students to have read more widely and extensively. Dr. Noyes also indicated that extensive revision would be forthcoming in all areas. He maintained that this was necessary if we were going to do a better job in identifying the superior potential college student and at the same time alert the secondary schools so that they might in turn revise their preparatory programs.

This leads us into the second point to consider: the pressure placed upon colleges. It is not just idle talk that we need more and better prepared faculty. In order that such a faculty function at a high degree of efficiency, they must be given facilities in which to work as well as the best equipment. Unless additional funds are provided in one way or another, colleges are not going to be able to expand their facilities and accept a larger number of students. If the demand for higher education remains great, and the supply of staff and facilities does not keep pace with this demand, then the colleges are by circumstances forced to be more selective. One needs but look at the percentile cut off point for admission to see how clearly this has been established. At the present time many of the ivy league colleges will not accept students unless they place in the top ten percent of their graduating class and have an accumulated college board score of not less than thirteen hundred.[1]

In discussing the third point, that of increasing costs, additional staff, as well as students' demand for help, it would be well to examine some of the programs in action and what have been the results relative to this point. At the time the reading program was first introduced at Harvard,[2] the first group consisted of approximately thirty volunteer students. In a period of ten years this had grown to nearly 800 consisting of 400 freshmen, 150 upperclassmen, 230 graduate students from various schools with the majority from Business Administration, and two professors from the law school. In the past five years over 3000 have been enrolled; not only undergraduate students but graduate students and faculty members as well. Has the program been a success? Perry has this to say: 1. It appears that most students can learn to read better. 2. The mechanics of reading are inseparable at this level from the individual's purpose as he reads. 3. The possession of excellent reading skills as indicated on conventional reading tests is no guarantee that a student knows how to read long assignments meaningfully. 4. There can be no general rules for leveling the exercise of judgment in reading, and 5. A short separate course of general instruction, like the Reading Class can be of some contributing value.

Further evidence of gains made by college students in a reading program were compiled by Ray at Oklahoma State University.[3] The college reading improvement program is an accepted service of the University.

Students enrolled in the program made significant gains in test performances in vocabulary, comprehension and total reading and rate of reading. reading.

Bliesmer's review of research in college reading reported on 19 evaluations of programs and found positive results of the programs, almost without fail. [4]

In 1954 Kinne reported on five semesters of reading improvement courses at Purdue University. He indicated that there were consistent gains in reading speed with occasional increases in comprehension. [5] Entwisle in her findings showed some kind of improvement following a study skills course seems to be the rule. [6] In Tuckey's report on seven years of reading improvement programs at Purdue Calumet Center, 703 students, under 25 years of age, made a mean gain of 394 words per minute with a gain of eight percent in comprehension. [7]

Laffitte stated that "the reports of most reading improvement courses leave little doubt that the reading speed of college and adult trainees can be substantially increased without injury to comprehension." [3]

Although the program at the University of Hartford has been in operation for a short period of time, each year the enrollment has increased. At the present time, because of the fact that qualified staff is not available and space is limited, all students who would like to avail themselves of the program cannot be included. As to the cost: no charge is made to the student, but two-thirds of the teaching load of two faculty members is devoted to the program. This adds up to but one point, additional financial burden on the college.

In considering the fourth point, that of programs being offered by more colleges, Heilman has this to say, "educators at the college level are becoming more aware of the fact that many students, who otherwise have the ability to do college work, fail because of inefficient reading habits. To meet this situation more and more universities are adding reading improvement courses which may or may not carry academic credit, may or may not be offered tuition free." [8]

As to the fifth and last point, relative to the demand for College Teachers of Reading, no definite statistics have been published. A random survey of Universities who prepare personnel for these positions indicates that these graduates are in demand.

In summary I would like to say, that there appears to be sufficient evidence to indicate that all college students could benefit from such a program. It will take some students longer than others to improve their efficiency in reading, but at the same time no student should be deprived of a service which undoubtedly will aid him in doing a better job with his college studies. I hope that in the very near future all college students will be required to take a reading improvement program. Such a program could very well be planned so that as soon as a student demonstrated satisfactorily his proficiency he could be dropped from the program. Such a program, in the hands of effective instructors, could do much to cut down the present numbers of students who are forced to leave college because of low academic achievement.

When we admit students to the college we have said to them that we believe they have the capacity to make good. College faculties must assume the responsibility to enable these students to succeed.

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EFFECTS OF A SPEED READING PROGRAM FOR COLLEGE STUDENTS

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Under certain circumstances, purposeful reading calls for the fastest coverage of material that is possible. In these situations, the college student who has had a course in speed reading which stresses good comprehension has a decided advantage. The key to effective speed reading is that the student understand the purpose for which he is reading. When his efforts are in the direction of locating specific information, identifying certain sequential information, or getting the general ideas from a chapter or book, then skill in speed reading is truly an asset.

Effective instruction in speed reading calls for the same general approach as other purposeful reading but involves different mechanical techniques. All the steps of SQ3R are essential to good speed reading.

The material to be covered must be surveyed to gain insight into the scope, difficulty, and organization. The question asking step fulfills the need for purpose setting. Reading is followed by recitation, and then review, if necessary.

We have found that large numbers of college students are interested in increasing their reading speed. Stevens reports: "Over 95 per cent of the students expressed on a questionnaire the need to improve reading speed."[1] Not all college students, however, are able to respond to this type of instruction. Therefore, in agreement with Pauk,[2] we feel that a student must have earned a right to this type of program. High scores in Verbal CEEB, fairly wide reading background, and few if any complications in basic skills, provide us with potentially effective students. The basic skill requirement is an adequate reading speed with good comprehension and no basic vocabulary deficiency. Students who lack these skills belong in the normal college reading program designed for skill development and improvement.

In a program of approximately 15 one hour sessions, the students are placed in pressure reading situations with fiction type materials. Emphasis is placed upon paraphrased recalls, intensive concentration, rate flexibility, and purposeful reading. Another 15 hours of instruction in reading is included, involving standardized comprehension exercises and periods of critical book analysis.

As might well be imagined, the results of such a program with this type of selected group are usually quite good. Final reading rates are four to five times beginning rates, and skimming rates reach the 3,000 to 4,000 words per minute area. The question to be answered is: "Are these increases permanent?" If a course is designed to develop basic speed reading skills and these skills do not last after course instruction is completed, then the course fails in its basic objective.

In an atempt to find the answer to this question, students who had completed this program two years ago were surveyed. An evaluation of their reading proficiency in light fiction-type material indicated the following:

1. Average reading speeds (1,000 w.p.m.), with good comprehension, were triple the speeds reported at the beginning of the course. These were about the same as reading speeds at the end of the course.
2. Skimming speeds (2,000 w.p.m.) were about one-half as fast as those reported at the end of the course.

These same students were asked to answer several questions concerning their use of speed reading techniques subsequent to the course. From their responses, the following conclusions were drawn:

1. Although most students did not participate in any formal practice of speed reading, they claimed to have used the skills "at times, but not frequently."

2. The most common sources of material used for speed reading were texts and magazines. Students indicated that texts were previewed and reviewed with this technique.
3. Students felt that they were fairly good "speed readers" today.
4. The course did not belong in the freshman year.

We have concluded from this information that, although the program was not as effective over the long run as we would have wished, the speed reading skills developed during the course were fairly permanent.

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THE STATUS OF READING IMPROVEMENT PROGRAMS IN INDUSTRY

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My part in this symposium is to discuss the status of Reading Improvement Programs in Personnel Training in Industry. In order to do this with any degree of reliability, I feel that I should confine my discussion to the extent of this kind of training in my own company, General Motors, and more specifically, General Motors Institute.

General Motors Institute is the central training facility for General Motors Corporation. As such, it is primarily a five year degree granting cooperative engineering college offering degrees in Mechanical, Industrial and Electrical Engineering. As a part of the curriculum, but on a voluntary basis, the cooperative engineering students may elect to enroll in the Reading and Study Improvement Program. This is a ten week program, starting the second week after registration and continuing through the remainder of the semester. This program is undergoing revision which, it is believed, will make it more beneficial to the students.

The Reading Improvement Program is also offered in the Part-Time Program. This is an adult education program offered as a service to the community. Industry-related courses in engineering and management are offered as a supplement to the offerings of other educational institutions in this region. The purpose is to serve the needs of individuals as they seek to advance their education and to keep abreast of the changes and growth in science, technology and management. Although courses are also offered in Executive Development, Engineering, and Technical and Professional areas, the Manageemnt Program is the only area in which the Reading Improvement Program is offered.

The Management Program is designed to provide training for people who wish to prepare themselves for greater responsibility in supervisory or managerial positions in their respective area of employment. A total of 37 courses are offered throughout the year. All students enrolling in the Management Program must take the Diagnostic Reading Test prior to final enrollment. All enrollees who obtain a Reading Index between 100 and 250 must take the Reading Improvement Program. Those persons who obtain a Reading Index of over 250 are excused from the program, while those who obtain a score of less than 100 are referred to a remedial reading program sponsored by the Mott Foundation – a community-wide adult education program.

Last year approximately 250 adults were enrolled in our Reading Improvement Program. This program has been in existence since 1953 and in that time approximately 3,000 persons have participated. The General Motors Reading Improvement Program was originally devised for use with management personnel in the operating Divisions and subsidiaries. As such, the responsibility for administering the program lies within the purview of the Management Training Department. This department conducts training programs of many kinds both in the field and as resident programs at GMI. Included in the resident programs in which the Reading Improvement Program is or has been active are the Applied Management Program, the Communication Skills Program, and the General Motors Overseas Wholesale Sales Training Program. However, all three are coordinated by the Management Training Department.

The Applied Management Program is a one-week program covering such areas as employe training, responsibility of the supervisor for methods improvement, oral communications, decision making, labor relations, as well as reading and listening improvement. The reading improvement segment consists of two 2-hour sessions. The Diagnostic Reading Test is administered and a brief explanation of the reading process is given in the first two-hour session. The second two hours is used to give the participants some practice exercises and Part I of another form of the Diagostic Reading Test. The primary purpose of this short exposure to reading is to make these people aware of the need of greater emphasis on this medium of communication.

The Communication Skills Program is a two-week program for all management personnel having at least one level of supervision reporting to them. The purpose of the program is to help executives in the development of the basic skills required for effective communications. The areas covered are: oral communication of ideas, written communication, listening, and reading. The reading improvement segment of this program consists of twenty of the eighty hours. The objectives of this program are to:

1. Give the individual some guide lines by which he will be able to increase his reading efficiency.
2. Increase the individual's enjoyment of reading.
3. Enable the individual to read more efficiently the many memoranda, letters, and reports, that seem to be increasing in number.

Reading for main ideas and for detailed comprehension are emphasized. Individual counseling is available to those who wish it as well. Both individual and group practice sessions are utilized with some use being made of pacers during the individual practice session.

The General Motors Overseas Operation Wholesale Sales Training Program is a four-week program for sales managers from the overseas operations of the Corporation.

These men attend sessions on human relations, business management, speech, listening, and reading improvement. The reading improvement segment consists of fourteen hours of lecture-discussion and practice. Since representatives from ten to fifteen foreign countries are represented in this program, the language problem has been severe for some of the participants. This problem, as well as others, was never satisfactorily resolved; consequently the reading improvement segment has been eliminated from the program for the current year. Sixty men have participated in the program in the three years it has been in existence.

In addition to the resident programs, there are usually a number of reading improvement programs going on in the field annually. For example, during the training years 1963-1964 the program was given sixteen times in eight divisions. In other words a total of 539 employees in eight divisions of the Corporation took the reading improvement program as part of their management training activities. These programs were also coordinated and taught by representatives of the Management Training Department. Each of these representatives has been trained by me or my colleagues in the presentation of the program. For the most part, these men are experienced industrial training personnel with graduate study backgrounds including courses in Psychology. Contact is maintained with these men in order to give assistance if it is needed.

Another phase of the field activities, also under the direction of the Management Training Department, is the Plant-City Reading Improvement Program. This simply means that the management personnel from a group of plants in a particular location are participating in the program rather than the personnel from one plant. Altogether, nine Plant-City programs involving thirty units of the Corporation and [illegible] managers were involved in this program during 1963 and 1964. Although no exact figures have been kept, it is estimated that close to 3,000 managers have participated in the Reading Improvement Program since its inception in 1952. This program is one of two or three that has consistently been in high demand over the years.

A low estimate of the number of persons who have participated in the program is 6,000. This is considered low because our records are far from complete, especially for the Part-Time Program and the in-plant programs in the field. These figures, of course, do not reflect the number of employes who have participated in other programs either on their own or as plant-sponsored. It might be added that we limit the enrollment in this program to 15 persons. On the basis of surveys conducted by myself and others in the past, it is believed that General Motors has the most extensive industrial reading program in existence today. Mr. Webster's survey of current programs may or may not corroborate this statement.

The results of surveys made by myself in 1956, 1958, and 1962 were reported at the 1962 National Reading Conference.[1] At that time, there had been an increase of four per cent in the number of companies reporting reading improvement programs over those reporting this type of program in 1958. It must be remembered that business has been good for the past three years. Most companies have a tendency to increase their training budgets when business is good and to decrease them when business is not good. Therefore, it is quite likely that there would be another increase in the per cent of these companies reporting reading improvement programs if they were to be polled today.

There is every indication that General Motors will continue to offer this training to its employes for some time to come. It will fluctuate somewhat from year to year just as it has in the past. However, as long as there is a demand it will continue to be offered.

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MOVING IN THE RIGHT DIRECTION

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In 1959, George Spache made the prophetic comment that in the future reading programs there would evolve a decreasing use of mechanistic and drill procedures accompanied by an increasing dependence upon counseling and broader techniques.[1] Although this condition is slow in coming, it appears that in Government reading programs there is a tendency to move in this direction.

A broader reading program that stresses insights, skills, and counseling is necessary as an aid to federal employees in their occupations. This program should stress efficiency in reading by developing speed, comprehension, selectivity and vocabulary in varying degrees according to the course as they are determined by the needs of the participants.

The design of the reading program of the Graduate School of the Department of Agriculture, with which I am most familiar, is to stimulate a better overall adjustment of the federal employee to his reading associated with his work. The program has now been in existence for eight years and an approximate total of 500 federal employees in G.S. grades 3 through 18 attend the program yearly; the participation covers a wide spectrum of the federal departments agencies besides Agriculture, such as: Interior; Health, Education, and Welfare; State; Commerce; Navy; Defense Intelligence Agency; Internal Revenue Service; Veterans Administration; Army; and Central Intelligence Agency. The most numerous participants from Agriculture are G.S. grades 11 and 12 compared with G.S. Grades 13 and 14 from other government agencies. It is not unusual to conduct a Graduate School reading program with twenty per cent of the participants having Ph.D's and another high percentage having medical and law degrees. Conssequently, the average participant in the program is generally a well-rounded, intelligent and mature adult, and the level and design of the program must be geared to fit his needs.

The Approach

Our approach is to develop reading efficiency by motivating the participants themselves to be self-generating. This is accomplished by attempting to separate speed from comprehension during the incipient stage of the program. This emphasis on speed prevents the participants from becoming bogged down in the excess redundancy usually found in government writing.

Experimentation and research has determined our current methodology. The use of machines is minimized since it appears that although tachistoscope application will increase digit and configuration familiarity and recognition, it is not always transferable to reading, or it has been found the skill can be accomplished sooner in the reading situation. Pacing by the instructor and with the Shadowscope exerts muscular tension and therefore increases perceptual speed and anticipation by forcing the organism to find the fastest way to the goal. This reduces the recognition time.

There are four basic areas of difficulty the federal employee struggles with that the self-generating approach helps to overcome; they are:

1. Slow reading and failure to understand because words come too slowly to integrate, resulting in regression and daydreaming.
2. Reading everything at the same rate of speed and lack of selectivity.
3. Inability to measure the retention or comprehension of the content being read.
4. Reading that is other than conceptual reading.

During the program the participant keeps his own progress records which are kept confidential for the sole use of the participant and instructor as a means of determining his goals, evaluating his progress, and selecting the most useful training techniques for him to follow. Although the participant is in a group laboratory situation, he is working on his own goals and needs at his own rate and ability level. The only competition is against his own potential. Certificates of "Satisfactory Completion" are given at the conclusion of the program, but no scores or other information is included on the certificates. This non-grading private record-keeping policy allows the participant to relax and concentrate on improving his reading to the highest potential rather than worry about how his progress will look on personnel records or in comparison with other members of the program.

The laboratory materials are made available to participants during the interim when there are no scheduled classes. They may use the laboratories for make-up sessions, additional practice, or continued practice when the formal training period is ended.

At the conclusion of the program, most participants are able to read at least double their pre-course speed with the same rate or better comprehension. In three courses given by the Graduate School at Defense Intelligence Agency this past year, the average speed per person increased from 287 words per minute to 637 words per minute and comprehension increased from 81 to 82 per cent. The program of the Graduate School and most government reading programs make no claims to be able to make everyone a speed reader. The program does, however, offer the opportunity, through efficient reading techniques and a regular program of practice, for each government employee to develop his own reading potential.

The Graduate School's policy has been to learn from the participants and to adjust the program to their needs. This is accomplished by observing, questioning, speculating, and testing. If we find it necessary to draw from other disciplines to teach reading, we do so. Whatever method will enable efficient reading to be achieved by the government employee, the program tries to be flexible and broad enough to fill the demand.

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READING FLEXIBILITY AS RELATED TO LEVELS OF READING COMPLEXITY

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The terms, rate and power, speed and comprehension, faster and better, power and speed, efficiency and effectiveness, all reflect concern of reading researchers over the two most obvious aspects of reading skill: how fast one reads, and the understanding with which one reads. Flexibility comes into the picture because it is becoming increasingly clear that good reading is not necessarily fast reading.

The basic complicating factor in the study of the role of flexibility and speed is that speed is always speed of something. It does not stand by itself as a factor. Levels of complexity in comprehension obviously will influence the speed of reading. So, the factors in reading comprehension are part of the total problem.

The reading act is made possible on one hand by the mechanical factors and on the other by thinking and purpose. By recognizing these supporting factors, levels of reading complexity can be outlined (from higher to lower) as follows:

Level IV—This is the level of reflective thinking and valuing processes, which affect the reading act, but which are superimposed on it.

Level III—This is the level of comprehension in reading and includes following a plot, knowing who the characters are, selecting major themes, and noting supporting details. Simply "understanding what is meant" is the basic skill.

Level II—On this orientation level, selection takes place according to a pre-set criterion. The reader recognizes a word, looks for a definition, uses an alphabetical index system, finds a list of items, or compares items for similarity.

Level I—Mechanical or perceptual level. Here, basic physical responses such as eye-movements may be observed. The physiological and chemical factors which support the reading act are to be described here.

It can now be recognized that no simple flexibility test is possible. The question must be asked, "flexibility of what?" In effect this means that we want to determine what good reading is. For speed on easy and hard material, they are:

(A) The working assumption for speed on easy material is: Good readers can read faster.[1] The qualifying condition here has to do with the criteria for excellence **when speed is desirable.** Under such conditions, the higher the speed, the better should be the rating.

(B) The working assumption here for flexibility is that a good reader will lower his rate when encountering relatively harder material, and increase it when encountering relatively easier material.[2] Shores and Hubands[3] report that the relation between speed and comprehension disappears when the reader encounters difficult material.

In 1952, Sheldon and Carillo noted the scarcity of tests of flexibility.[4] In 1963 Braam[5] noted considerable disagreement about definitions and and ways of measuring flexibility. One pertinent issue suggested by McCracken[6] has to do with the need to distinguish internal and external flexibility.

Letson[7] has illustrated an informal way of setting up a flexibility test by using material at two levels of difficulty, and also by using different directions regarding what to look for.

Gross-Flexibility Testing. When a group of 94 college students from all colleges of Utah State University were given an easy selection to read, followed by a hard selection, the words per minute scores were as follows:

	Average W.P.M.	S.D.
Easy	212	30.2
Hard	193	22.5

It is clear that, as a group, these students did change their speed when they encountered harder material. The standard deviation showed more variation for the harder material.

A flexibility score was assigned in terms of 14 w.p.m. changes in rate. Questions were used only to remind the students to read carefully; no question scores were used.

A Flexibility Scale

Change From Easy to Hard

−7	−6	−5	−4	−3	−2	−1	0	+1	+2	+3	+4	+5	+6	+7
Speeded Up 61-70 W.P.M.							No Change							Slowed 61-70 W.P.M.

In order to make a more meaningful evaluation, the ACT score for reading in social science was used as a reference point for each student.

To analyze the data of this pilot study a 2 x 2 table was used, with high and low (up to +2, the mean for this group).

Results were:

	ACT SCORE	
Flexibility	Low	High
High	16	20
Low	40	18

This gave a Chi Square significant at the 5% level. Some limitations, in addition to sample size, need to be observed. The difference was not in the good performance of those who had high flexibility scores; it was in the low ACT scores of those with low flexibility. Students with low flexibility scores at a rate of about 2-1, did worse on a task requiring a high level of reading comprehension. It should also be noted that basic aptitude, and the natural limits to flexibility of a poor reader whose initial poor rate leaves less room for flexibility may also be factors. In other words, the flexibility is only a part of a possible cluster of possible disadvantages. At any rate, a flexibility score of +2 or less on this scale, which is the mean of the reference group, means an increased probability of poor performance on a college reading task. We suspect that the flexibility score may show a modest + correlation with intellectual aptitude, but with this random sample, intelligence was not tested.

Internal Flexibility Testing. In this pilot study with 57 college students, a paper by J. S. Mill on the subject of "Society" was used as the basic test. The group average for this article was 152 w.p.m. It was selected to be relatively hard. Inserted in two places were paragraphs on civics from a 7th grade source. The w.p.m. on this original easy source with a comparable group was 218 w.p.m. The paragraphs selected fit into the general theme, although a perceptive student might wonder about some change in style. Only one student mentioned that it "seemed different."

The students recorded the time in seconds for each paragraph they read. The w.p.m. were figured later for this H-E-H (hard-easy-hard) sequence, that is, the rate for the easy, and the hard paragraph on either side of it. The shift should be up for the HE portion, and down for the EH portion. Scores were w.p.m. changes.

This preliminary pilot study is used mostly to bring up issues which a good commercial test should meet, if it is ever developed. It seems clear that several sets of HEH's are needed, with perhaps H H E H H also. The embedded hard paragraph (E H E and E E H E E) should also be tried as well as an easy one. These need to be made available to match the initial rate of the student. In some cases the matching initial rate should be to the E, and sometimes to the H. These contrast effects need to be studied in greater detail.

In this part of the study, results were somewhat similar to those for the gross or external test of flexibility. The 2 x 2 table shows:

	Internal Flexibility Lower Half	Upper Half
Upper Half	12	19
Lower Half	22	6

—scores to +69

Again, those in the upper half on flexibility showed more variable performance on the ACT, while those with poor flexibility scores were significantly worse in the ACT.

For this group, it was important to use the **mean** flexibility as the dividing line, since if simple plus and minus scores were used with zero as the dividing line, relationships to ACT scores dropped.

Selective Flexibility Testing. When the students in the group above had finished the reading, they were then instructed to do an outline of the article, timing for each paragraph, as it was used. An interesting reversal occurred here, with those who speeded up outlining the easy part doing significantly worse on the ACT.

Results were:

	A.C.T.	
Flexibility	Low	High
High	24	6
Low	9	18

These data indicate that the person in this situation who speeds up an outline when he finds an "easy" section is losing a desirable adjustment. Of course, overall outlining speed is another problem. In general, a good reader will also outline faster. In this case, the findings are somewhat unexpected unless we consider the psychological set of a good reader who has been tussling with a difficult selection. He simply did not, under these circumstances, slow down—he was set to think hard as he struggled with J. S. Mill. It was not as easy to shift "up" for an easy paragraph. How many experiences of this type it would take for him to shift would need further study. Could it be said, here, that the poor reader was somewhat relieved to find something he could do, and so put it out of the way quickly as evidence of some skill?

There are other varieties of selective flexibility to be considered in addition to this one of making an outline of material read. Outlining has the advantage of producing useful data as to selection and organization. It shows what the reader considers to be the most important parts. But, in addition to outlining, the selectivity method could be directed to finding pre-selected items, locating the conclusion, and to the Level IV skills of evaluating the adequacy of available data.

Conclusion

These variations in testing for flexibility make it clear: (1) that the kind of flexibility must always be defined in reporting results under that term, and (2) that considerable research yet needs to be done on the kinds of reading and thinking situations of which flexibility may be considered to be a part.

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TEACHING FLEXIBLE READING SKILLS IN HIGH SCHOOL

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The teaching of flexible study skills in high school becomes more important day by day. With our society in a constant state of flux, with jobs being eliminated and new fields being opened, it is conceivable that a large percentage of our high school students, given a normal life expectancy, will require some type of retraining before their productive life is over. In addition, a world of conflicting ideologies and changing social structures requires citizens who can read critically, evaluate evidence and draw conclusions from the information and opinions that are available through the various media. It follows, therefore, that the most important thing to teach our high school students is how to learn.

Vocabulary

The first step is vocabulary and usage skills. Vocabulary is recognized as being of major importance in the teaching of any subject and learning any reading skill. Each subject area has its own language. This was brought home to me recently in a brief visit to a boyhood friend. I dropped in on his physics research lab and he explained what he was doing. I still don't know, in spite of having studied physics. He then invited me to his home. Over coffee, his wife, a former social studies teacher, and I began discussing education. My friend asked a question which showed an obvious unfamiliarity with our terminology. His wife's reply was, "See dear, we have our own language, too." It has been said that in a modern university club the only topic of conversation is the weather because that is the only subject that can be discussed by everyone. Having studied a little meteorology, I submit that even that topic might not be safe if a meteorologist were included in the group.

In the Reading Laboratory at Jersey City State College, we work on an individual basis, primarily with our college freshmen, to improve reading and study skills. Many of these students come to us needing help in study skills in a specific area. Science vocabulary frequently is the stumbling block. Most areas of science have roots in a specific language and the terminology is consistent in that language. For example, biology terms have mostly Latin roots. Taking the time in high school or junior high school to point out that renal refers to kidneys, that cardiac refers to the heart, that pulmonary refers to the lungs and so on, will pay off in improved performance in that particular subject, and to some extent, carry over into other subjects. Even in geology, which has its roots in many languages, there is a consistency in the seeming inconsistency. For instance, if a student is aware that much of the work on tidal waves and submarine disturbances has been done by the Japanese, then when he encounters the term "tsunami"he should be able to at least categorize the word in a specific area of the field of geology. Similarly, terms referring to deserts are usually of Arabic origin; so "barchane" or "dreikantor" should be recognized as having something to do with deserts.

As important as learning the vocabulary is acquiring an understanding of the specific usage of the subject. For example, the word "bridge" is used in many ways in the various subject fields. Bridge may refer to a game of cards, a structure, a part of a musical instrument or an instrument for measuring the value of an unknown resistance to the passage of electricity. Still other meanings of bridge, to bridge, or bridging are found in many other subject areas. Obviously, the understanding of the specific usage of a term can have great bearing on the comprehension in that subject.

Comprehension Skills

Neglected comprehension skills of particular importance to high school graduates are often speed and skimming skills, and paragraph reading skills. Speed reading is often looked upon with disfavor by teachers, probably as a prostitution of education for profit. However, in business and professional circles and to some extent in higher education, it is necessary to read rapidly. I am often asked, "How can I learn to read faster to get through all of the material on my desk?" Speed itself is not the answer, but the answer is the ability to change speeds to suit the material and purpose. It is, to a large extent, the job of the high schools to insert a "reading transmission" which will enable the students to get their reading into "high gear." High school should also open some turnpikes to practice high speed travel through the printed page.

Teaching children how to skim a paragraph to pick out the main idea equips them with a valuable tool for later life. There are several ways.

this can be done. One is to read only the long words in a paragraph. Another is to pick out the main sentence in a paragraph. Strang and Bracken [1] show very clearly how this can be taught in their book, **Making Better Readers.** A third technique is to ask questions such as, "What date did this happen?"; "What formula can be used to solve this problem?"; or "What was the main character doing when this happened?" The students then skim the paragraph or chapter to find one important fact. The able student will also benefit from instruction and practice to improve eye movement and perception span as suggested by Wood and Burrows.[2]

Critical reading skills involving interpretation, weighing evidence and drawing conclusions are of major importance but often neglected in many subject areas. Bruner [3] says, "Teaching specific topics or skills without making clear their context in the broader fundamental structure of a field of knowledge is uneconomical in several deep senses. In the first place, such teaching makes it exceedingly difficult for students to generalize from what they have learned to what they will encounter later." Students who learn to question, compare and evaluate in current events may accept without question what is printed in a science book. Charles B. Huelsman, Jr.[4] lists nine pitfalls met in critical thinking. Several of these failures, such as failures to detect errors in inductive and deductive reasoning, failure to detect over generalization and failure to detect over simplification are at least as important in science as in other areas of the curriculum.

A science laboratory period or lecture demonstration in which no opportunity is provided to make generalization, reason deductively or inductively, and draw conclusions, has missed an important opportunity for teaching study skills. Drawing graphs of experimental data, making predictions, and then verifying results with additional experiments is a sound way to teach these study skills. Supplementary reading of articles dealing with various theories will provide an opportunity to weigh evidence and draw conclusions. This is often done in social studies but it can also be effective in science or math. For example, there are at least four major theories as to the formation of the earth and several minor theories. Arguments for these theories can be read, the evidence weighed, and the theories interpreted and discussed. Individually conclusions can be drawn as to the best theory.

I have outlined ideas for teaching flexible study skills in the high school. In summary, two main ideas are involved. One, every teacher should be concerned with the teaching of reading skills in his or her own subject matter field. Second, each teacher should provide for individual differences by teaching these skills at the time and level appropriate to the student's ability.

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ESTABLISHING A NEW READING IMPROVEMENT PROGRAM FOR COLLEGE STUDENTS

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Upon the joyous event that a college administration has recognized the need for a reading improvement program on the campus, the person responsible for its planning must weigh the following quintet of questions: What type of program? What size? What intake? What objectives of instruction? What organization of instruction?

Type Of Program

The majority of college reading improvement courses of the nation are special programs curricularly separate from "regular' courses. The present writer's study of colleges affording a reading service revealed that of a total of 242 colleges reporting, only 20 indicated a program integrated with a regular offering.[1] Whereas English composition courses are the most frequent "regular" offering with which reading improvement programs have been integrated, the professional literature notes scattered instances of integration with other offerings, such as European history and engineering physics.[2]

As for the advantages of combining instruction on reading with a "regular" required course, one gain is that all students benefit, and another is that students develop their skills functionally in a specific field. In the latter case, a weakness of separate programs is avoided, for, as pointed out by Spache, reading specialists "are not discovering methods or materials for teaching students to read or study more effectively in mathematics, in physics, in economics, in history, and in any of the half dozen other fields."[3] English composition courses afford a further advantage because of the positive relationship between reading ability and writing ability. For example, Durkin has reported successful use of reading improvement films to teach college students clear and forceful writing.[4]

The obvious disadvantage of combining a reading program with a regular offering may easily outweigh the above advantage. A reading service that is part of another course inevitably competes with the regular subject matter. The teacher will tend to compromise, if not improvise regarding the reading instruction. Reading guidance will thus lack the organized and substantial body of instruction found in a separate reading course. Furthermore is the question: "Will the students readily transfer to their other subjects the reading skills that they have studied in one particular subject?" One can hope for an affirmative answer to this question only if the subject-matter teacher concerned is a reading specialist.

The teacher responsible for initiating a reading-improvement service on a campus will establish a less experimental program if he organizes it as a separate offering.

Size Of Program

Affording a reading program to an entire freshman class seems like an ideal condition. Unless, however, the college administration grants the program the status of any other required course, such vexing problems like those described by Sandberg can sabotage the best intentions of the administration:

> Budgetary limitations make it impossible at present to engage a reading specialist on a full-time basis. Secondly, it is impossible to find a free hour each day when the freshman class as a whole can be given reading instruction. Thirdly, there is not at present even one free period a week at which the entire class can meet since the only hour now available is used for Freshman orientation. Consequently, the Freshman staff had to consider all these problems and, in the light of them, establish a program which could be operated within the limitations.[5]

The present writers' study referred to above indicated that most college reading programs serve only a limited segment of a school population, a condition supported by several earlier investigations. The majority of colleges reported grouping students into classroom or clinical sections of less than 26 students, but a significant number of institutions indicated that all instruction was given in sections of more than 25 students. As for the duration of the core program, the study revealed a range of total hours of 15 to more than 30.

In the absence of accepted practices as to size and duration of college reading programs, the person establishing a new program may well adapt the planned program to his own particular institution, organizing a course of 15-30 hours into the semester, tri-semester, or quarterly structure of that institution. A classroom grouping of 20-25 students and laboratory seating for about 10 students would not be far from usual procedures.

Intake Of Program

The following candid description by Jones of his intake practice certainly applies to more than his own program: the enrollment policy is to "take first applicants until all space is gone."[6] If, however, expediency does not dictate that priority of request be the basis of selecting students for a reading-improvement program, a person planning a new reading-improvement program at college can consider the following suggestions:

1. Give priority to incoming freshmen. Students should learn the more sophisticated reading skills needed for college study before they develop habits of improvisation and while the freshness of the new educational experience still motivates them.
2. Seek to attract into the program students scoring in the lower deciles of the reading test, or of its equivalent, on the entrance battery.

These students can be sent duplicated letters describing the service and inviting them to enroll.

3. If the service is very limited, give priority to "underachievers" in reading – students scoring significantly lower on a reading test than on a verbal apptitude test. Raising a student's level of achievement to his level of potentiality can be accomplished more readily than developing the reading achievement of a student already reading close to capacity.
4. Unless a need for relative homogeneity requires selection of only remedial students for the reading course, students above average in school achievement should not be denied enrollment. The professional literature affords numerous instances of considerable reading and personal gains of such students in a reading course, and of their high responsiveness to the course.
5. If possible, screen applicants to the program by means of counseling interviews. Any improvement service tends to attract students whose particular needs require a different service. These students need redirection, or at least should be induced not to take a place in the program for which another student has a much greater need. To obviate the counseling bottle-necks that develop during the beginnings of terms, the Reading Laboratory of the University of Maryland has instituted a "self-screening technique," consisting of a five-minute tape recording covering the same topics that the intake-interviewer would normally present.[7]
6. It is appropriate to counsel a student to enroll in a non-credit program, but to require him if he does not wish to enroll may stifle his motivation to learn. Blake, however, has reported that college freshmen on probation derive benefit from a compulsory reading-improvement course.[8]

Objectives Of Instruction

Despite a persistent skepticism about the significance of test scores, shall we not boldly declare that one of the objectives of a college reading program is to enable the participants to achieve gains on a post-course reading test as compared to a pre-test? And despite a cynicism regarding high-sounding goals, shall we not also venture to announce that a second objective of a college reading program is to give its students an insight into the satisfactions of learning from the printed page?

Regarding the first objective, that of achieving gains on reading tests, gains in reading speed are the most common items in evaluative reports of college reading programs. Though such gains are usually accompanied only by modest increases in comprehension scores and though serious doubt has been cast on the significance of vocabulary gains, the professional literature offers examples of programs reporting consistent increases in all three areas.[9] Suffice it to say that a basic objective of a college reading program is to teach the traditional reading trinity of speed, comprehension, and vocabulary skills.

As for the kinds of materials that should be the basis of this trinity, a person establishing a reading course should seriously consider the following suggestion of Centi: the college reading teacher should actually "talk to the teachers within his own institution to determine the type of reading which is required of students." [10] The students are in the program for the immediate purpose of developing their ability to participate successfully on the college scene. They want to read their school textbooks efficiently at a speed that enables them to complete their homework, and effectively at flexible rates that increase their understanding. They want to learn the techniques of comprehending study-type reading. And they want to improve their ability to learn the specialized vocabulary of each subject matter. A person planning a reading-improvement service on a campus should, accordingly, plan lessons and practice on study-type readings. Supplementary (but subordinate) topics the person may wish to include in his objectives are to offer guidance on skimming and skanning of textbooks, in particular of tables of content, prefaces, and indexes; on reading maps, charts, and diagrams; on discriminating between fact and opinion; and on the attendant skills of doing homework, such as concentrating and studying for tests.

Organization Of Instruction

Most college reading specialists agree that instruction should be organized into (a) a combination of group and individualized instruction, and (b) a combination of reading-improvement textbooks and mechanical aids. According to a study by Miller of 233 colleges, of these a total of 96 reported basic group lessons with reading textbooks, supplemented by individualized practice with mechanical aids, whereas 51 institutions reported a reverse emphasis on organization: basic group practice with mechanical aids, supplemented by individual lessons with reading textbooks. [11] A program organized upon exclusively individualized work with reading accelerators, for example, will severely limit the availability of the campus reading service. On the other extreme, a program affording no individualized work can fail to respond to the students' particular needs.

To be more specific, each student is likely to exhibit a relative reading weakness in one or several particular fields. For instance, students at least fair achievers in science can be miserable performers in English, and will need guidance and practice in reading literary materials. Whether the individualization of instruction begins early or late in a reading program, it is this particular kind of instruction that can be most relied upon to implement the transfer to students' regular courses of the skills that they have learned in the separate reading program.

To one establishing a new reading-improvement program, the alpha, mu, and omega of the planning is: instruct the students on particular skills, teach the students to transfer these skills to their regular subject-matter courses, and finally guide the students to develop these skills into permanent reading habits.

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WHOSE JOB IS IT TO TEACH READING?

Reginald Stevens Kimball

Youth Education Systems

To answer this question, one must first determine what is meant by reading. Reading isn't reading isn't reading (with a bow to Gertrude Stein.) As the semanticist would put it, reading poetry isn't the same as reading prose, nor is reading narrative the same as reading exposition, and reading mathematics involves far-differing techniques. Most assuredly, reading of whatever nature is something more than Rudy Flesch would have us make it. He seems to have demoted reading into mere word-recognition and word-calling, whether that calling be vocalized or "heard with the mental ear."

There are many "readings," and the reading expert on the college level is expected to cope with all of them by mass onslaught. Here our colleagues on the elementary-school level have a great advantage over us, for one and the same teacher has opportunity in the course of a school day to help students develop various reading-skills in various classes: reading to get the story or reading to enjoy the sound in the literature class, reading to get the facts in a social-studies class, reading to get at the facts in an arithmetic class, and so on down the line.

When I was a beginning high school teacher, it was still expected that a teacher of whatever subject would expend some effort in helping his students to master the reading-techniques which that subject peculiarly required. In this era of ultra-specialization—alas!—each subject-specialist has shrugged the academic shoulder, feeling that he has "enough to do" in teaching his subject without being expected to teach reading, which he feels should already have been learned if the preceding teachers, elementary and secondary, had done their jobs properly.

So we come to the clamor for reading-technicians at the college level. I have found that even some graduate students, doctoral candidates, needed to be taught how to read in their own fields of specialization!

For more than a quarter of a century, I have been devoting attention to the over-all problem of helping students to improve their ability to read what is put before them. In the brief time at my disposal here, I propose to sketch three instances—selected from many—to bear out my thesis that every teacher must teach reading, even at post-high-school levels, and that no "magic" can be expected from the attempts of the reading-specialist unless the individual instructors bear their peculiar and co-operative share of the load.

Instance I

Place: A small college devoted primarily to the training of teachers of physical education.

Problem: Inability of the students to read successfully assignments in the ancient-civilizations text and collateral readings. (Recent requirement by the state department of education that every candidate for a teaching license must pass such a course.)

Analysis: The textbook which had been selected for the course, though supposedly written for freshman students and purportedly authored by "big names" from a major university, was one of those huge tomes with ultra-compressed minutiae.

Working with these students in small groups, we helped them to begin to analyze their difficulties. Some reported finding as many as a dozen or fifteen unfamiliar words to the page. Many did not know how to "use" the book: how to be guided by chapter-titles, section-captions, and run-in paragraph-heads, or how to interpret charts and diagrams, let alone how to consult the index.

We prepared assignment sheets, distributed singly lesson by lesson, in which difficulties that might be encountered in reading the next assignment were anticipated: a listing of such words as must be learned and guiding-questions which, almost paragraph by paragraph, would help the student to find his way through the verbiage. Not much more than the old high-school and upper-grade technique? Admittedly, but it did the trick for many.

Work with the weaker individuals on their own particular difficulties —eye-movement, word-grouping, etc.—had a place in the program and was given its due share of attention, but the major share of gain was to be attributed to the process of study-group analysis.

Instance II

Place: A private junior college in New York City, organized on the work-study plan, students in pairs alternating between job and classroom.

Problem: Complaints from almost every department that many students were incapable of independent study at the college level.

Analysis: Since the more-able graduates of schools in the metropolitan area could obtain free tuition at branches of the city university, it was obvious that the vast majority who enrolled in this junior college were of middle-third high-school rating, at best, and it was found that some were of lower-third rating. The students' complaint was that they could not cope with the vast amount of reading: textbook assignments too long and supplementary research virtually staggering.

An initial attack had been instituted by requiring that all entering-students enroll in a course which used as its text Norman Lewis's **How to Read Better and Faster**. This was, obviously, a buckshot type of approach, giving scattered attention to all of the various types of reading but not concentrating on the individual's immediate difficulties encountered in those courses which he was currently pursuing. However, the "magic" implied in the title of the book had an appeal, since at that time speed-reading was something of an innovation insofar as the general public was concerned.

Fortunately, this junior college shared quarters with a private secondary school which had a reading-laboratory well-equipped with the machines, devices, and gadgets then available, and members of the high-school faculty who were familiar with their applicability rendered assistance. However, it was manifest that not even the most-efficient reading-skill could help a student to read in particular fields which smacked of being "almost in a foreign language."

We enticed, cajoled, and even coerced many of the members of the junior-college faculty to audit one or another of the sections of the course, and some of them expressed the belief that they "got more out of the course" than the students did. At least, their eyes were opened to problems that they readily admitted had "never occurred" to them.

The next step was to persuade each member of the faculty to spend a portion of the lecture period or the class-discussion period on the assignment for the next meeting—again the "high-schoolish" approach. It became standard operating procedure to distribute study assignment job-sheets, pinpointing the new terminology that would be encountered in the reading of each chapter of the textbook—whether mathematics, science, psychology, literature, or social science. After a few class meetings conducted under the new approach, no faculty member was heard to grumble about the additional burden which had been imposed upon him, for all came to recognize that this one burden smoothed the way by eliminating most of the causes for complaint.

Instance III

Place: A refresher-school for enabling high-school graduates and college students to "brush up" for civil-service examinations.

Problem: Recognition that in a short but intensive refresher-program, ability to cope with vast amounts of material in the shortest-possible time was mandatory.

Analysis: We isolated in advance the essentials which would be needed, and then prepared appropriate instructional materials.

For each field of specialization, the similar examinations which had been given over a ten-years' period were broken down into components, and all kindred questions from the various examinations were grouped, regardless of year, and then arranged in "lessons" and "courses," each lesson incorporating a major topic or group of closely-related topics.

We found that from twenty to thirty per cent of each examination was concerned with pairing words—synonyms, antonyms, or definitions and descriptions. Perhaps another twenty-five per cent dealt with factual matters, concerned with the subject-field. Surprisingly, the remainder of each examination—nearly half—directly involved critical-reading: logical inference, getting at the meaning, grasping the content of a paragraph, "spotting" inconsistency.

For dealing with any of the questions, ability to read at high speed was a requisite, since it figured out to be an average of 1.8 minutes that a candidate could afford to devote to each question on the examination. There would not be much time for backtracking, re-reading, and pondering upon the unfamiliar.

Here comes my same old hobby-horse! The assignment sheets, as in the previous instancess, listed the words which would be encountered in the questions which would be the basis for the next session's analysis. After two or three sessions, the students began to realize that the distasteful dictionary-work paved the way to reading the questions without hindrance. Further, from the course which was devoted to synonym-study, there developed a carry-over of ability to deal with roots, prefixes, and suffixes, and a whole new world of wider vocabulary was opened up. In a twelve-weeks' course, some who were virtually non-readers at the outset made surprising gains. Over a long range of years, this simple technique has remained the backbone of the course.

Summation

My thesis has been—and still is—that the atack upon the reading-problems of the college student is not the job of the clinical reading-specialist alone, that it must be recognized as a major concern by the instructor in every course, in every subject, from the lower grades straight through to college undergraduates, graduate, and post-graduate levels. Unlesss a reader encounters words which are familiar to him, or which he knows how to embrace familiarly, no amount of accomplishment in speed or efficiency of reading-technique is going to help him. If you are still unconvinced, just try reading a page of Hungarian this evening!

THE ROLE OF THE PRIVATE CLINIC IN THE COMMUNITY

Frances B. DeWitt

The private reading clinic is usually founded because of community needs. It is often avant garde in providing services incorporating new ideas and techniques which, as they are favorably recognized, force the educational and social institutions as well as the medical and other related professions to give more than lip service to the philosophy of the education and treatment of the whole child.

The freedom which is enjoyed by the private reading clinic to experiment with new ideas related to teaching and evaluating the child leads to new techniques in education and treatment which eventually seep into the classroom and into the offices of the other professional people trying to solve the physical, emotional and educational problems of children. There is a lag of many years before the seepage begins to be effective.

The DeWitt Reading Clinic was founded because of a classroom teacher's frustrations and recognition of a community need. There were children in the classroom whose learning difficulties seemed unique; the difficulties seemed to stem from not just one factor but a constellation of factors. No one existing classical etiological syndrome seemed to fit their symptomatic behavior. The past fifteen years have been dedicated to finding the answer to the questions "what causes a child to have a unique learning problem? How can such problems be prevented?"

This clinic has over two hundred fifty children enrolled in remedial, corrective and developmental academic programs. There is a staff of twenty-six trained and highly dedicated people working in behalf of all who come seeking help for their children. This growth came about because of a desperate need and because the clinic was built on a philosophy which all the staff members can and do embrace. We believe that the statement "A child fails because he does not want to learn" is fallacious. We know that every child wants to learn; every child can learn; and every child is happiest when learning.

Before starting our clinic Mr. DeWitt and I visited many clinics both private and public. As we exchanged ideas and philosophies with people in this field, we began to crystallize our thoughts and to verbalize our plans.

We planned that the primary program of academic therapy would be for the child having an extreme learning disability; our secondary program would be for the student who needed to correct faulty habits of learning and to develop efficient academic skills. The goal for all was to be able to function successfully in the classroom. Therefore, we would need space for not only private sessions but also group programs. Students of all ages, even non-reading adults, with not less than average intelligence would be accepted.

We do not run a summer program where the child attends for just so many hours in the summer. It is our belief that for the child with a specific language disability the summer program alone is more detrimental than helpful, for the child only returns to the classroom with no plan for continuing therapy and soon finds himself right back in the same old rut of failure, frustrations and lack of confidence. We can because of our organization offer a continuous program of therapy throughout the year.

Our only summer program is offered to high school students achieving average or better grades and scoring in the average or better percentiles in group reading tests. This program is a 30-hour program to develop flexibility of speed and comprehension. The groups are limited to eight students. For the first time this summer we are planning to offer to high school students a developmental spelling program. This need has been recognized.

Other services, other than academic programs which private clinics might offer to the community and which we have found helpful, are workshops conducted in school districts where the administration is trying to cope with the problem of reading failures and recognizes the need for specially trained teachers. Seminars led by clinical personnel, where classroom teachers meet to discuss the child with reading problems and what they can do to help him in the classroom, are also offered and carry academic credit granted by the college which sponsors the seminar or course. course.

Parent education is another service. Parents meet in small groups to discuss learning problems and probable etiological factors. Here woven into the discussion is the role the parent plays in accepting the child even though he has failed. These group discussions help the parent to understand that the child is not failing because he does not care, but that failure is caused by factors beyond his control

As our clinic is more and more recognized as a positive beneficial force in the community, referrals come not only from the satisfied parent but more and more from schools, doctors, public and private counseling services, public services such as Health and Welfare Department, and Juvenile Hall. We have found all willing to cooperate now that we have proved ourselves. Each referral brings about the opportunity to make exciting discoveries related to learning problems and concomitant behavior problems.

What is our future direction and the future direction of other private clinics? It seems to me the field of Clinical Academic Therapy is new and little explored–that the private clinic shall in the future, as in the past, be avant garde in bringing to the public's attention an existing lack which affects the adults as well as the children of the community. Because of the freedom to explore a need as it becomes apparent, the private clinic will continue to contribute more and more much needed proved techniques for overcoming the high illiteracy rate in our nation. The clinic is publishing a quarterly journal to present material on proved diagnostic and therapeutic techniques.

There is high national interest in education right now, apparently more than has ever existed in the past. Some of this interest develops out of the recognition of the correlation between academic failure and juvenile delinqency. It is to be hoped that private clinics will be supported in the part they play in overcoming the waste of our young people through the ravages of juvenile delinquency. Unfortunately, because of a lack of available funds, many sound research designs for further exploration into causes and prevention of academic failure are lost in the desk drawers of private clinics throughout our nation. It is further to be hoped grants that are reserved for public institutions and non-profit organizations might be made available to private organizations. Members of these organizations have gone through many years of hard work, demanding, stressful times and have provided service in the past which has been most beneficial to all – the child, the parent, the community, and eventually the nation as the child becomes a self-sustaining citizen. These private organizations should be preserved and the freedom to continue the contribution of pioneering work be made possible through grants and participation in the federal educational bill.

DEVELOPMENTAL USES OF I/T/A

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As noted at Lehigh University symposia and conferences during the course of this year, a number of creative uses of i/t/a have been developed, all of which are developmental. I refer to the use of i/t/a in a unit on the phonology of English as part of the English Curriculum at the Junior High level at Lonpoc, California, and to the i/t/a use in a study of the sound-stratum of poetry in seminars on poetry at the College Senior level. In each of these reports, it is noted that i/t/a is first mastered as a medium for transcription of sound and/or transliteration of conventionally printed materials.

However, the greatest use of i/t/a at this time is in the beginning stages of reading. We note its use in dealing with the linguistically and experientially deficient (wrongly called the culturally-deprived) in a large scale project in Tennessee. Here, the report in March notes that groups of this population were achieving 3-1 reader status in i/t/a and that historically this was unheard of. We should note the work in many schools in beginning reading where each is trying i/t/a experimentally, and turn to the work in Bethlehem, Pennsylvania, for indications of progress since this district pioneered work with i/t/a and provides a first-hand look at how i/t/a proceeds in a normal classroom under less than ideal conditions.

We have seen in other reports what kind of progress and what problems exist when i/t/a is used for the first time in a school program. The follow-up into the second year show similar progress.

As noted in Table I, 35.4 per cent of the i/t/a population in the second year had not at this time formally transferred and were instruction-

Table I

Second Grade Instructional Levels at the Tenth Week Point of the i/t/a and T.O. Populations Before Standardized Testing and Performance Effected Changes

	i/t/a N-367 15 Teachers	T.O. N-869 31 Teachers
T.O. Reader Levels		
3-1	35.4%	2.4%
2-2	15.3%	20.5%
2-1	12.2%	44.4%
1st	1.1%	28.1%
Primer or below	.5%	4.6%
	64.5%	
i/t/a Reader Levels		
3-1	18.0%	
2-2	3.8%	
2-1	6.8%	
1st	6.8%	
	35.4%	
Total	99.99%	100.00%

ally placed in i/t/a materials at the first through third reader levels. Slightly less than sixty-five per cent (64.5) of the i/t/a were instructionally placed in T.O. materials and, as noted, 35.4 per cent of the population were reading 3-1 materials as compared with a 2.4 per cent of the T.O. population.

A survey of the populations' levels as of April 1st as indicated in Table II, indicated that 5.5 per cent of the population had not completed formal transition by this time, and were instructionally placed in first to third i/t/a readers and that a similar number (6.4 per cent) of the T.O. population were found at the primer and first reader levels. It is noted further that 26 per cent of the i/t/a taught population are instructionally placed in 3-2 and 4-1 T.O. materials while none of the T.O. populations are at these points.

Table II

Second Grade Instructional Levels of the i/t/a and T.O. Populations as of April 1, 1965

	i/t/a N-353	T.O. N-868
T.O. Reader Level	Percentage	Percentage
4-1	7.65	-- --
3-2	18.70	-- --
3-1	24.93	35.34
2-2	31.73	[illegible].48
2-1	10.48	29.72
1st	-- --	6.23
Primer	-- --	.23
	94.49%	
i/t/a Reader Level		
3-1	1.13	Total 100.00%
2-2	4.24	
2-1	.57	
1st	.57	
	5.51%	
	100.00%	

When, however, programs of instruction are familiar and no material handicap occurs, progress is remarkably different. As noted in Table III of the replication reports, some 40 per cent of the i/t/a first grade replication population were reading at primer or above points as compared with 3 per cent of the T.O. population at the ten week mark in first grade. Since both populations contained a number (9 per cent) of first grade

Table III

Instructional Level Achievements at the Tenth Week Mark of the Replication Study Population — November, 1964

	i/t/a N-913		T.O. N-462		
	Number	Percentage	Number	Percentage	
Book 1 A or below	178	19.4%	78	16.9%	1st PP or below
Book 1 B	366	40.1%	181	39.2%	2nd PP
			167	36.1%	3rd PP
			22	4.8%	4th PP
Book 2 (Primer)	354	38.8%	13	2.8%	Primer
Book 3 (1st Reader)	11	1.2%	1	.2%	1st Reader
Book 4 (2-1)	4	.4%			2nd Reader (2-1)
		99.9%		100.0%	

repeaters, the achievements beyond the primer may be due to this factor. Nonetheless, the distributions of the populations indicate relatively rapid progress of the T.O. population in this short period and a marked difference in numbers achieving primer level status in favor of the i/t+a population.

Table IV

Replication Study, Bethlehem First Grade Population
Instructional Level Achievements as of April 15, 1965

Reader Level	i/t/a Number	i/t/a Percentage	T.O. Number	T.O. Percentage
3-1 (T.O. or Book 7	298	32.18		
3-1 (i/t/a Book 6)	143	15.44		
2-2 (i/t/a Book 5)	159	17.17	3	.66
2 (i/t/a Book 4)	198	21.38	118	26.05
1 (i/t/a Book 3)	40	4.32	242	53.42
P (i/t/a Book 2)	55	5.94	66	14.57
PP and below	33	3.56	24	5.30
	926	99.99%	453	100.00%

As noted in Table IV, some 64 per cent of the i/t/a population are instructionally placed in 2-2 or above materials as compared with about one per cent of the T.O. population at the 2-2 level. Some 10 per cent of the i/t/a are at primer or below points as compared to 20 per cent of T.O. population at the same levels.

It would appear that simplification of traditional spelling using i/t/a does in fact simplify the reading act and affects reading achievement as identified by reader level achievement.

It appears that i/t/a as a medium has numerous applications and that no limitation on methology is yet discernible. Such limitations as exist appear to be limitations of the creativty of indivduals. We may assume that further uses will be developed; we must await additional reports to determine whether all are as fruitful lines of inquiry as those currently being reported.

USE OF THE INITIAL TEACHING ALPHABET WITH EXCEPTIONAL CHILDREN

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Are the characters of the i/t/a more difficult for exceptional children to learn than the letters of the traditional alphabet? Can exceptional children, taught to read with the i/t/a, effectively make the transition to the traditional alphabet?

These questions were part of the summary of a recent meeting of educators, psychologists, and school administrators who were discussing the use, and the problems growing out of the use, of the i/t/a for reading instruction for exceptional children.

In my position as one of the instructional supervisors for the Lehigh-Bethlehem Teaching Alphabet project, I have had contact with exceptional classes in which the augumented alphabet is used for reading instruction. The classes to which I refer include the educable retarded (I.Q. 50-75) at the primary level (C.A. 8-11).

While there may not be research proven answers for their queries, and these reasons could readily be cited – only a small number of special class students are involved, this medium has been used with the educable retarded for a relatively short period of time, the activities involving the i/t/a in these classes are not a part of the Lehigh-Bethlehem first grade research project – there are sufficient indicators which can be interpreted as possible answers at this point.

There are 19 children in the group which began using the i/t/a in September of 1963. Based on criteria which were in accord with their ability, none of these children was progressing sastisfactorily in reading. Hence, the decision to try the i/t/a with them. According to the **Jastak Wide Range Achievement Test,** the frustration level of this group in reading ranged from zero to second grade.

As of February 1, 1965, one and one half years of instruction later, this is the progress these children are making. One student had made the transition into the Traditional Alphabet, reading at the 2-2 level. Eight others had made the transition at the 2-1 level. Three had learned all 44 characters of the i/t/a and were reading Book 4 of the **Early-to-Read** series. Four had learned between 30 and 40 characters and were reading in Book 2 of that series; the remaining three were reading in Book 5 of the Downing readers. They had learned about 20 of the i/t/a characters.

This September, 25 new pupils were being taught to read with this medium. After the first half year of instruction, all were able to blend sounds and make words. The most advanced students knew almost all of the characters and were reading in Book 2 of the **Early-to-Read** materials.

Careful supervision, observation, and evaluation of the behavior of these students by classroom teachers, school psychologists, and special education supervisors suggest that these children can learn the i/t/a characters and that these children are meeting success in reading for the first time.

Likewise, it has been seen that educable retarded children, taught to read with the i/t/a, can make the transition to the Traditional Alphabet. There are nine children in our population who have accomplished this; three others are very close to formal transition.

One of the students who made the transition has had a school history filled with failure. This boy is 10 and has been in school for 4 years. In 1962 his I.Q. was 62 on the Binet. He was placed in a special class and has been there for the past three years. He showed no progress in reading. He was one of the 19 who were scheduled for reading instruction with i/t/a in September, 1963. By the end of the year he was reading in Book 3. In May of 1964 he had a total reading score of 1.7 on the **California Achievement Test, Lower Primary, Form W.** By February of this year he had made the transition and was reading material in the Traditional Alphabet at the 2-2 level. Tested last week on the **Jastak Wide Range Achievement Test,** (Traditional Alphabet form) he reached a frustration level of 3.8.

Perhaps we are on the way to solving one of the big problems facing those who work with special class students – finding an effective way of teaching these students to read. But, other problems still remain. In addition to limited intellectual capacity, many of these students are further handicapped in the ability to learn because of emotional disturbances, home background, bilingual difficulty, and other conditions. Is it possible that this ability to read could have some benefits as yet unconsidered?

THE USE OF I/T/A WITH DISABLED READERS AT THE JUNIOR AND SENIOR HIGH SCHOOL LEVEL

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One of the most serious educational problems facing the junior and senior high schools is that of the potential school drop-out. A typical youth diagnosed as a potential drop-out is generally unable to cope with the scholastic requirements in the various curricula areas and almost invariably suffers from a reading handicap. It often seems easier to diagnose the reading deficiencies of a disabled reader than it is to know what to do about his particular difficulty. He is apt to need special help which, in many instances, cannot or may not be given in regular classroom instruction, but should be provided by a reading specialist trained in diagnosis and remedial techniques.

Reading authorities are in general agreement that reading problems stem from a variety of causes, and that inability to function at a level commensurate with one's potentiality may often be attributed to many kinds of causal factors, including physical, educational, emotional, constitutional, and environmental. During the past century, a large body of research on causes of reading failure have focused on these factors while devoting relatively little or no attention to investigating the possibility that the alphabet and English spelling may be a serious source of difficulty in learning to read. Studies currently in progress in England and the United States are evaluating the effects of i/t/a on the reading achievement of five- and six-year-olds. Preliminary evidence suggests that the inconsistencies of traditional orthography impede progress in reading and that a consistent medium such as i/t/a facilitates the process of learning to read and write during the initial stages of instruction.

Exploratory Study

In order to determine whether i/t/a might be a useful approach for remedial reading instruction with junior and senior high school students identified as retarded readers (the discrepancy between potential and achievement measured at least one year) an exploratory project was started in February, 1964 to evaluate the feasibility of this approach. Since the program involved a small number of students for a period of approximately four months, only a subjective evaluation was planned at the end of June.

Forty-nine disabled readers, in grades nine through eleven, in the Uniondale public schools, Uniondale, Long Island, were selected for the pilot program. These were students having major deficiencies in word perception who had long histories of reading failure and frustration. Moreover, these students had prior remedial instruction at earlier grade levels without making substantial progress. Thirty ninth-grade students were divided into two groups. Those of lower intelligence and reading ability were assigned to the i/t/a group. At the high school level, two other groups involving students from grades nine through eleven were formed. Because of scheduling problems, it was not possible to equalize the size of the groups, and thus one group had seven students, and the other group twelve students. Two high school remedial reading teachers were trained in i/t/a and a traditional orthography (T.O.) group. As stated previously, it was not possible to set up a controlled experiment since it was virtually impossible to control all the variables that might affect achievement.

Pre-test reading measuress were administered: the **Gray Oral Reading Paragraphs** and the **Gates Reading Survey**. During the previous school year the **Otis Quick-Scoring Mental Ability Tests** had been administered to all students in the school district. Table I gives data of the i/t/a and T.O. groups.

TABLE I

INITIAL TEST SCORES OF THE I/T/A AND T.O. GROUPS

	I/t/a 9th grade Group N- 15		T.O. 9th Grade Group N- 15		I/t/a High School Group N - 12		T.O High School N- 7	
	Range	Mean	Range	Mean	Range	Mean	Range	Mean
Otis Quick Scoring I.Q Score	72-101	88	84-108	100	83-111	96	82-114	94
Gray Oral Paragraphs	2.3-4.5	3.6	3.1-7.3	5.2	2.2-8.0	5.2	2.6-9.0	5.2
Gates Survey								
Speed and Accuracy	4.5-6.8	3.6	6.1-11.9	9.1	5.3-12.0	8.4	6.1-11.5	7.9
Vocabulary	3.4-11.0	6.6	7.0-11.2	8.9	4.5-11.0	6.5	3.1-10.4	7.8
Comprehension	3.1-11.1	5.8	7.6-11.1	9.4	5.4-11.1	7.4	3.7-9.1	6.7

Instructional Procedures

Groups met daily for forty-five minutes. Students in T.O. were taught by conventional methods and remedial techniquess. Emphasis was placed on developing independence in word recognition and a larger sight-word vocabulary.

Initially, the i/t/a students were taught the sound-symbol relationships of Pitman's alphabet through experience story writing activities. Instruction and practice were given in identifying and writing the characters, associating each symbol with the sound it represented, discriminating between sounds, and analyzing unfamiliar words using knowledge of the sound-symbol correlation as a basis for blending or sounding. The instructors had anticipated that it would take the students several weeks to learn the new alphabet, but instead this was accomplished after one week. Those with poor auditory discrimination skills were given intensive practice discriminating between sounds, and particularly with auditory fusion or blending of sound elements.

When the students developed a certain degree of independence in analyzing unknown words and were able to read with some fluency, it became obvious that they could progress rapidly through material of higher levels of readability. Since no published material appropriate for students of this age level was available, it was necessary to transliterate by hand and by an i/t/a typewriter. Materials were used from a wide variety of sources, and included interesting narrative and expository selection. Many of the passages were taken from the students' social studies and science texts. After approximately one month, students were reading material at eighth and ninth readability levels.

Although students could work out the pronunciation of any i/t/a word, it became increasingly apparent that they needed help with comprehension and vocabulary skills since they were now reading content containing unfamiliar concepts and difficult vocabulary beyond their level of understanding. In point of fact, they were reading content requiring higher levels of critical thinking and interpretation skills than they had ever used before. In essence, the students had mastered the basic mechanical skills of reading, but now needed to learn the comprehension and interpretation skills essential for developing reading competence.

Transition Activities

Approximately three weeks before the end of the school year, transitional activities were introduced, i.e., students were transferred from i/t/a to material printed in traditional orthography. Various acitivities were planned to encourage students to discover for themselves the most frequently occurring T.O. spellings in words for each i/t/a character. For example, the character **ae** is most frequently represented in T.O. by the graphemes **a**-consonant-**e**, **ai**, **ay**, and **a**, when it is positioned in an open syllable. T.O. material of a lower level of readability than that used prior to transition was used to help pupils develop fluency in reading and become accustomed to reading in traditional orthography. Using this approach, teachers bypassed the usual teaching of phonic rules and generalizations. Instead, instruction focused on the phoneme-grapheme relationships of traditional orthography.

Due to the short period of time this study was conducted, it was not possible to assess accurately whether i/t/a students read as easily and fluently and at the same reading level in T.O. as they had in i/t/a. Researchers noted that, generally, the brighter students seemed capable of reading equally well in both orthographies, while those of lesser ability experienced difficulty making the transfer since they could not read with the same degree of facility in T.O. as they had in i/t/a. These slower students read approximately one level below their i/t/a achievement level.

Subjective Evaluation

Although this i/t/a study was intended to be exploratory and not a carefully controlled project yielding statistical results, a subjective evaluation seemed possible based on the observations of the teachers and researchers.

1. Disabled readers, having major deficiencies in word perception quickly mastered the sound-symbol correlations of i/t/a after only several sessions. As a result, they became independent in analyzing unfamiliar words, and were able to read interesting material commensurate with their intelligence and maturity.

2. Teachers noted that once students had learned the forty-four characters and caught the concept of blending the sounds into words, they became capable of reading material of successively higher levels of readability.

3. It was felt that students demonstrated more positive attitudes toward learning and greater interest in reading magazines, books, and newspapers. Many of the students said that they read more books indepently than they ever had.

4. Teachers of other subject matter areas reported that students seemed to show greater interest and enthusiasm, were completing assignments, and in general had improved work habits.

5. Because of the satisfaction that students felt in correctly attacking new words, they seemed to attend more closely to word parts rather than reverting to habits acquired in T.O. reading – omitting a word – or guessing wildly using configurational or context clues as a means of analysis.

6. Greater attention can be focused on the development of comprehension and interpretation skills after the mechanical skills of reading have been learned.

7. Students seem to show greater self-confidence as a result of their success. One student who was making excellent progress was reported to have said, "No wonder I never learned to read before, they gave me the wrong alphabet!" No longer did this student feel that the onus of failure was his inability to learn.

8. The new alphabet was, apparently, an important motivating factor from the standpoint that students did not associate learning in i/t/a with previous lack of success and frustration experienced in traditional orthography.

9. The consistencies of i/t/a significantly reduce the learner's burden in mastering the mechanical skills of reading, which in the past had been the major stumbling block that prevented these students from achieving success. Past feelings of discouragement and personal inadequacy seemed to be markedly alleviated once students no longer experience failure.

Conclusion

It would appear that this exploratory study of the effects of i/t/a on the reading improvement of disabled readers having major word perception problems suggests that i/t/a may be a useful approach for remedial instruction. Whether i/t/a would be beneficial with cases having little or no word perception difficulty, but who are primarily deficient in comprehension and vocabulary skills was not explored in this study.

During the current academic year in the Uniondale School District, i/t/a is being used for remedial instruction with seventh and eighth graders as well as with a group of high school students. This should give us additional time to study more intensively the effects of i/t/a and of transition in particular and the possible beneficial effects it may have for certain types of remedial cases.

THE ROLE OF THE COORDINATOR IN THE SECONDARY READING PROGRAM

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The role that a coordinator plays in a secondary reading program obviously depends upon the nature of the program itself. I would like to begin our consideration of this role on a rather negative note, identifying what I consider to be weaknesses in secondary reading programs currently in operation and proposed in professional literature. The elimination of these weaknesses and the emergence of a new type of secondary reading program would create a new role for the coordinator. Consider some of the weaknesses:

1. Secondary reading programs are frequently only renovated elementary reading programs. We have been rather successful in teaching reading at the elementary level. We have logically assumed that the procedures which bring success at one level will assure it at another. Therefore, we have projected characteristics of good elementary programs and have patterned secondary programs accordingly.

The direct teaching of reading is important at the elementary level. Students must learn the reading process and it is sufficiently complex to warrant time being set aside in the curriculum to teach it directly. Relatively few secondary students read this direct instruction, yet reading classes are projected to the secondary level and they constitute the main part of the reading program.

At the elementary level, reading instruction is orderly, following a tested sequence of skill development. We also project this characteristic to the secondary program. Reading teachers focus on sequential development of skills in reading classes. Content teachers are given lists of skills identified as important to their subject areas and urged to teach them. This is in spite of the fact that the textbooks which content teachers use are built on neither carefully controlled vocabularies nor prescribed sequences of skills.

The major problem related to a secondary reading program is not squarely faced: How can we teach students to read their content area texts more successfully? It appears that we have little at the elementary level to project. Austin and Morrison's findings reported in **The First R** indicate that we have not achieved much success in teaching reading as it relates to the various subject areas at the elementary level. It is interesting to speculate on what secondary programs might be like today had we experienced greater success at the elementary level in this area of reading instruction.

2. Most programs and proposals take much too literally the cliche "Every teacher a teacher of reading." We attempt to convert content teachers into reading teachers. We identify skills peculiar to each subject area and ask the teachers to give students direct instruction in these skills. When teachers say they have too much content to cover and can't take time out to teach these skills, we raise our eyebrows and secretly question their professional dedication and insight. But should we?

We are preoccupied with lists of skills and direct reading instruction patterned after the elementary school program. This causes us to assess the responsibility of the content teacher incorrectly. He must teach his students how to read their required texts, not how to gain proficiency with an arbitrary list of skills. He should teach reading skills functionally, as demanded by the required text, not in isolation as an appendage to the curriculum with hope for transfer to the text when needed.

3. Proposals for programs are more admonitions than prescriptions. The extent to which this is true is the extent to which we fail to meet the needs of secondary teachers. It has been my experience that few subject area teachers need to be convinced that their students could read better. Nor do they need to be told that they should do something to help. Their question is "How do I do it?" Again, my experience has been that when they are shown how, most teachers are delighted to put the ideas to work.

Admonitions are implied as well as directly stated. Program proposals frequently suggest that, since few teachers are able—or willing—to participate in a program to teach reading through their course content, primary emphasis must be placed on direct reading instruction in English and reading classes. The implication is that the

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better program will have to wait until teachers enter the profession thoroughly trained to participate. If we wait for this to happen, many generations will pass. In-service programs must be started to show present-day teachers how to participate. Teachers teach more as they were taught than as they were taught to teach. In-service courses are needed to break the cycle.

4. Present and proposed programs spend a disproportionate of time on relatively few students. This forces us to accept a comparatively low level reading performance from the majority of our students.

5. Present and proposed programs make improper use of reading personnel. It has been demonstrated that the reading person's impact on students is greater by working with classroom teachers than by teaching comparatively few reading classes. Yet most secondary reading teachers work with small groups of remedial readers or with students in developmental reading classes. They have relatively little opportunity to work with subject area teachers.

Nature Of The Program

Now, this rather negative beginning sets the stage for a discussion of the role of the coordinator in a secondary reading program. His job is to organize and lead a program which avoids these negative features: a labor worthy of Hercules.

The reading coordinator should build a program which shows teachers how to teach reading within the framework of their course content as applied to their texts; which is directed to the needs of all students, not just the remedial or corrective few; which makes the best use of reading teachers' time and talent; which is designed for secondary schools and is not a remodeled elementary program.

The goal of the secondary reading program should be to help each student read as efficiently in each subject area as his abilities and experience will allow. Content teachers use their required texts as the vehicles for this instruction. Skills are developed functionally, as they are needed to complete a given assignment successfully; therefore, skills and concepts are developed simultaneously. Teachers are not asked to take time out to teach skills in isolation, following an arbitrary list. Rather, as a regular part of their course, and as applied to materials they require their students to read, they teach their students how to read the assignment successfully and ensure understanding of the ideas which they want their students to acquire.

The program places reading instruction within the framework of good content teaching procedure, not as a separate function. Instruction provides for variations in students' ability and achievement. It assures skill and concept development and application. It ensures students' active participation in learning.

The program recognizes that most secondary students operate quite well at the literal level of comprehension. Only those comparatively few students who experience difficulty in the basic mechanics of reading are unable to operate at this level. However, a high percentage of our secondary students, including the very bright, lack proficiency in the higher levels of comprehension. Some have called these levels the critical and creative; some have called them the reflective and expressive; others, the conceptual and associational; still others, the interpretive and applied. But by whatever name they are identified, there are two levels of comprehension beyond the literal: (1) that level at which students are able to interpret the details they comprehend literally and to develop concepts from the relationships they perceive; (2) that level at which students are able to apply these concepts to previous experiment, present circumstances, or future need.

This program takes into account that students need guidance to develop competence at these levels of comprehension. This program does not assume competency; it assures it by guiding students through the process of skill and concept development.

Establishing The Program

But how is this utopia reached? Can a program of this type actually be realized? The answer to these questions embodies a description of the reading coordinator's role in a secondary reading program.

Secondary reading programs which involve all teachers and really function are established neither by administrative edict nor by reading committee consensus. We lack these programs either because of professional inertia or because teachers lack the instructional know-how. When we ask teachers to participate in these programs we are asking them to change the way they teach; so, in reality, we are asking them to change their lives. This is never done successfully by edict or committee consensus.

The reading coordinator can establish this program if he realizes that he is engaged in a type of psychological warfare. His job is to convert teachers to new ways of thinking and working. This is not done by presenting teachers with neatly packaged objectives, skills, lists, summaries of responsibilities, and saying, in effect, "Here's a terrific idea. Let's you do it!" This conversion comes as a result of a reading coordinator engaging in subtle persuasion and calculating intrigue. And it is a slow process.

When the coordinator takes this approach, the establishment of a secondary reading program follows an almost predictable pattern. He carefully assesses the faculty, identifying those teachers whom the rest of the faculty consider highly competent. From those, the coordinator identifies the few who "speak well" in the teachers' lounge, the ones to whom the rest of the faculty listen with attention and respect. These few are his target. It matters not what their subject area or grade level might be. These are the people who will begin the reading program.

The coordinator talks to those teachers and learns all that he can about their subject areas. The teachers will soon share their concern about students in their classes who do not read as well as they should or could. Every teacher of this calibre has this concern. And this is the coordinator's opening. He asks to observe the class. He then suggests that the students need guidance as they read the text so they can develop proficiency in reading at the various levels of comprehension. He further suggests that he would be happy to develop such a guide if the teacher would be willing to try it with his class. (Notice, he does not suggest that the teacher write the guide.) He then asks where the teacher will be in the text in about two weeks. Taking the text, he develops the guide. He shows it to the teacher to determine if the emphasized content is accurate and important. He makes it clear that this work is a partnership: that the teacher is the authority on the content to teach; that his own strength is in methods of instruction which develop proficiency in learning.

Subsequent to the teacher's approval, the coordinator completes the guide for classroom use. If it needs duplicating, he duplicates it. If it needs collating, he collates it. If it needs stapling, he staples it. If the teacher has 25 students in his class, the coordinator gives him 26 copies so he will have one too. He carefully explains what the guide is designed to do and how it should be used. The teacher only has to put the guide to use. And since it is related to the content he is covering and to the specific text in which he is giving the assignment, he is happy to use the guide.

The guide is one part of the total instructional procedure. Students are prepared for the reading they must do: properly motivated; given a purpose for reading. Then they are guided through the process of applying the skills needed to formulate and use the basic concepts embodied in the selection. The guide subsequently serves as the basis for group and class discussion; it engages students' interest and assures their active participation in learning. Teacher reaction is best characterized by an Earth Science teacher with whom I worked. He said, "I find that now more learning goes on for a given amount of teaching energy I expend." The program has begun.

The teacher will experience success and immediately request another guide, "just like that one." So the coordinator delivers another. Though the teacher will experience similar success with this second guide, he will begin to see how modifications could improve the procedure for his class. He will suggest some, often bringing the results of his work to the coordinator for confirmation and approval.

Because the teacher is respected and communicates well with other faculty members, other teachers will become interested and request materials. The coordinator will go through a time of tremendous work, but he must deliver. Often teachers within or among subject areas will request a non-credit seminar to discuss the ramifications of this type of instruction. It has been my experience to have the administration provide funds for summer workshops so teachers who have become interested in the program can develop materials for their subject area and grade level. Then, in-service courses are subsequently offered to present techniques of instruction as applied to these materials at the various grade levels and in the selected subject areas. In time, there is sufficient widespread interest and teacher competence so the coordinator can begin to consolidate his gains. He can give focus to the program by identifying subject areas and grade levels for which materials will be created and supplied for the full curriculum. Then, moving from subject to subject and grade to grade, he can gradually develop an all school program.

Notice the sequential development. The program is established because articulate teachers experience success and want to capitalize on its value. There is no need for administration edict or committee consensus. Teachers will support the program because it is theirs.

Implications Regarding Training

Reading coordinators can assume this role in a secondary program, but are they born that way? Probably some of both. As is the case with any person who works with people in a staff relationship or on a consultant basis, the coordinator must be flexible, yet know where he is going; patient, yet press for action; exert leadership, yet make clear his is a partnership with teachers. In short, he must be skilled in human relations. But there is more.

He must be able to live with loose ends. The program creates these. It may takes years before there is a neatly organized program. This is because the program grows from teachers' interest and response – and these rarely follow an orderly pattern in terms of subject and grade level sequence.

The coordinator must be well trained. He must have a knowledge of the secondary school curriculum offerings, a thorough knowledge of the field of reading and the process of learning. He must be experienced with instructional methods that provide for individual differences and which successfully engage students in the learning process. He must have a trained imagination that will allow him to adjust methods and procedures to fit the varying circumstances with which he is confronted.

Above all, the coordinator must have had supervised experience both in consulting with teachers in this role and in creating materials to suit the needs of students and teachers in many subject areas and at many grade levels. This training is the responsibility of us who prepare reading personnel. We must take these potential reading coordinators into secondary schools and show them how to work with teachers to establish programs where reading instruction, applied to students' required materials, is part of the regular course content.

Summary

The reading coordinator in a secondary school has the most strategic of all positions in secondary education. By establishing a realistic and good reading program, he can help teachers become guides to learning rather than remaining dispensers of information. He can help realize the goal of formal education: to equip students with ideas and skills so they can continue their education independently throughout their lives.

THE NEW YORK STATE EDUCATION DEPARTMENT'S EXPERIMENTAL READING MATERIAL: A PROGRESS REPORT

Edna Morgan
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An Ad Hoc Advisory Committee was invited into the State Education Department in December, 1962, to make general recommendations for the revision of the language arts and English Syllabus, K-12. This committee set up general guide lines for the syllabus revision that were to be translated into a working outline by the Department's Professional Advisory Committee the following spring.

The Professional Committee was comprised of personnel from elementary and secondary schools, colleges and universities, and major professional organizations. This Committee, meeting in March, 1963, was asked to reslove the major issues set forth by the Ad Hoc Committee and to set forth a philosophy of instruction that the ssyllabus should be designed to implement.

The outcome of this conference was a set of guidelines in each of the five major areas of the English language arts (Reading, Listening and Speaking, Composition, Literature, and Language) designed for use of consultants who were to be invited into the Department to write preliminary manuscripts the following summer.

The working committees, representing elementary, junior, and senior high school levels, were three member teams. They were charged with the responsibility of designating skills and suggested activities in each area in specific sequential steps so that an articulated K-12 sequence of skills would result from the summer's work.

The first major strand to be released was on reading, and even within this strand there were segments. Part I and Part II were devoted to the following segments of the reading strand: "Vocabulary Skills," "Reading Comprehension," and "Critical and Interpretative Reading." Other segments of the reading strand include "Oral Reading," "Locational Skills," "Work Study Skills," and "Rate of Reading."

Each of the five strands of the program is being prepared on a kindergarten-through-grade-twelve basis. The dominant emphasis of the program is focused on the sequential development of skills, K-12. While level designations are provided (K-3, 4-6, 7-9, 10-12), emphasis is on the continuing sequential development of skills.

The Experimental Material: Reading Section, **Part I**, **Part II**, and subsequently, **Part III**, was distributed to every school district in the State in June 1964. One hundred fifty-five school systems, in response to a Statewide invitation, volunteered to engage in official 1963-65 tryout of these materials.

An Orientation Conference was held in Albany on October 5, 1964, for the school systems engaged in tryout. Over three hundred representatives of these school systems participated in that conference. A series of regional conferences was planned and has been conducted in eight geographical areas of the State.

All conferences were planned in cooperation with local professional organizations and school districts and involved professional staff members from the higher institutions which train teachers in the language arts and English. The regional conferences, up to date, have involved over 2,000 elementary, secondary, and college professionals who are involved in reading programs. The conferences have been conducted by a Department team.

Three three-week workshops are planned for the ummer of 1965. These workshops will train language arts and English teachers in the effective use of the new syllabus materials in three major strands of the experimental syllabus revision. Workshop leaders will be consultants who have been identified as active and successful teachers in their various school districts.

As a result of this instructional program, based on the philosophy of systematic, sequential skill development, we expect the pupils in New York State to show growth in the desire to read for pleasure and profit; to show growth in independence in the mechanics of reading; and to translate that growth into sound creative and critical thinking, reading, and writing, based on broad experiences with materials of all kinds.

PERCEPTUAL DIFFICULTIES ASSOCIATED WITH READING DISABILITY

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In 1961 Standlee and Hooprich published an annotated bibliography of four hundred studies on adult reading from 1950 to 1960.[1] Not one of these studies dealt with the relation of perceptual factors to reading achievement. A few studies discussed the relation between number of fixations and reading, but no other perceptual problems have been considered.

On the other hand, the sophisticated elementary school reading specialist knows that visual perception is more than 20/20 vision. She knows that more often than not a child failing first grade will fail perceptual tasks which measure such factors as fusion, saccadics, near acuity and convergence and which measure the ease with which the printed word can be received by the nervous system.

One aspect of perception as it relates to reading concerns the manner in which the visual mechanism is adjusted during the reading act. The average college student reading 300 words per minute fixates his eyes 250 times during this time period. The ease with which these 250 adjustments per minute of the visual mechanism are made is directly related to the ability of the individual to aim his eyes correctly, look accurately from one object to another, and focus his eyes close to the point of regard.

The research presented here was undertaken to explore the hypothesis that reading disability and consequently lowered academic achievement on the college level are associated with difficulty in adjustment of the visual mechanism and visual fatigue.

Let us look at the freshman class of Drew University. The class of 1968, almost three hundred students, averaged 580 on the verbal section of the College Entrance Boards. On the Cooperative English Test, Drew freshmen average in the upper quartile of the nation. They represent the upper third of their high school class. Perceptual difficulties in the Drew freshmen? Remember we are talking about highly achieving college freshmen, not failing first graders.

Ninety Drew University freshmen participated in this study of the relationship of reading ability and academic achievement to visual discomfort and visual disability. On entrance all Drew freshmen are given the Cooperative English Test. The lowest fifteen percent of the class on the Speed of Comprehension score are required to take the course in

Reading and Study Skills. The thirty-seven students in this study who were enrolled in the course constitute the "poor" group. On the various measures of academic achievement, including the Cooperative English Test, the poor group cluster around the national average. However, by Drew standards they are deficient in their ability to read and comprehend the printed word. Another fifty-three freshmen not required to take the course because of higher scores on the Cooperative English Test constituted the "good" group. They were chosen to constitute a representative sample of the rest of the freshman class. This group is clearly in the upper quartile of the nation on the various measures of academic achievement.

Scores on the following tests were available for all students: 1. Cooperative English Test: Vocabulary, Comprehension, and Speed of Comprehension. 2. College Entrance Board scores: verbal and math. 3. High School Rank, Predicted Freshman Average, and Achieved first semester Grade Point Average.

The Keystone Visual Skills Tests were administered to all ninety students in the sample. Only nine tests were scored for this study. Five measures were taken at far point, four at near point. The far point measures were: 1. convergence, 2. fusion, 3. best eye visual efficiency, 4. worse eye visual efficiency, and 5. depth. The near point measures were: 1. convergence, 2. fusion, 3. best eye visual efficiency, and 4. worse eye visual efficiency. These measures by no means exhaust the factors which can interfere with the reception of the printed word[2], but they represent the factors measured by a type of screening device used by up-to-date school systems to detect perceptual deficiencies.

The Keystone Tests are administered in a stereoscope which simulates far-point and near-point vision. Far-point refers to distance vision where accommodation is relaxed. Near-point refers to the position of the test card where the eyes are adjusted for a reading distance of approximately 16 inches. All tests except depth are measured at both near and far point.

The first test (convergence) refers to the tendency of the eyes to aim inward (overconvergence) or outward (underconvergence) when viewing the test object. The second test, fusion, represents the ability to coordinate the two eyes so that a single test object is seen by both eyes. Visual efficiency measures the ability of the subject to perceive detail in one eye when both eyes are in use.

In order to evaluate the degree of visual discomfort experienced by each student, a questionnaire was developed to indicate the frequency and intensity of common visual symptoms. The questionnaire measured such factors as frequency and intensity of headaches, tearing, blurring of vision, and tired eyes. The questionnaire yielded a total Visual Discomfort Score and was then broken down into symptoms related to near-point, far-point, and visual fatigue.

In order to look at the differences between the poor and good groups on the various measures of visual abilities and visual discomfort, the means and standard deviations were computed for each variable. The interrelationships between the visual measures and measures of academic achievement were examined by computing an intercorrelation matrix for each group. The intercorrelation matrix provided a measure of the relationship of each variable with every other variable.

Of the nine visual tests in the Keystone Visual Skills battery, the poor group was significantly different from the good group on four tests: convergence at both far and near point and visual efficiency at near point in both the better and worse eye. On the convergence test the good group performed significantly more in the direction of underconvergence or outward turning of the eyes while the poor group was significantly more overconvergent, indicating an inward turning of the eyes. Thus the good group did not show a tendency toward perfect convergence on the test, but rather a tendency for the eyes to turn outward. The finding that poor readers and low achievers tend toward overconvergence was also reported by Kelley [3] in the **North Carolina Study of Visual Screening and Child Development**, and by Robinson.[4] It is not clear at this time whether the better readers show underconvergence during the reading act or whether the score is an artifact of the test apparatus.

On the test of visual efficiency, the good group showed significantly better efficiency with both eyes at near point than did the poor group. Failure on the test of visual efficiency may merely indicate a loss in visual acuity or indicate, more seriously, a lack of ability to keep both eyes focused on the point of regard.

The poor group scored significantly poorer on visual tests associated with reading difficulty and low achievement than the good group. The difference between groups on visual discomfort conforms to expectation. On the Visual Discomfort Index the poor group scored significantly higher on Total Visual Discomfort than the good group. The mean for the poor group was 20.49 and for the good group 16.26. There was no difference between groups on discomfort at far point, but on discomfort at near point the difference between means, 6.95 for the poor group and 4.38 for the good group was significant at the 1 percent level of confidence.

The poor students thus do poorly on visual tests measuring the degree to which the eyes work together and also report greater visual discomfort, especially for tasks at near point. These students report more headaches, eyestrain, blurred vision and jumping print than the good group who report significantly less incidence of these complaints.

Of the approximately two hundred intercorrelations comptued, roughly one-quarter reach statistical significance. Since a detailed list of these correlations would prove unwieldy, discussion of the pattern of the significant correlations would prove more meaningful.

The pattern of intercorrelations between the visual test scores and visual discomfort is distinctly different for the poor group and the good group. For the poor group who originally scored higher on discomfort and worse on the visual tests, there is a pattern of positive correlations between discomfort and visual deficiency. For example, overconvergence was associated with high discomfort and underconvergence with low discomfort. Low visual efficiency was associated with high discomfort. In the good group which had better vision scores and less fatigue to begin with, low visual efficiency was also associated with more discomfort, but the relationship between visual deficiency and discomfort was not found for the other vision tests.

In the poor group the intercorrelations between visual discomfort scores and visual test deficiencies ranged between .3 and .4. This finding leads to the conclusion that among poor readers at the college freshman level, visual deficiency as measured by standard screening tests is signifcantly associated with visual discomfort.

Thus far the data have shown that those students low on speed of comprehension as measured by the Cooperative English Test have more visual test score failures and greater visual discomfort than students scoring higher on this measure. The difference in the pattern of relationships between visual test scores and discomfort for the poor and good group suggest that the two groups represent very different visual populations. This difference is also found in the correlations between academic achievement and visual test scores.

For the poor group, significant positive correlations of .35 and .37 between far point visual efficiency in best and worse eye and first semester grade point average were obtained. Thus better visual efficiency was related to better grades. For the good group the correlations between far point visual efficiency in the best and worse eye and grade point average were – .28 and – .35 respectively. For this group worse visual efficiency was associated with better college grades. The latter finding supports those of Kelley, Robinson, and Harris who suggest that moderate degrees of myopia are associated with higher achievement.

On the measures of far point visual efficiency, there was no difference between the means for the poor and good groups. This suggests that a deficient score in this test may have two meanings. It may simply be an indication of myopia which would not interfere with reading, or it may be an indication of an inabilty to control focus and convergence during the reading act, a problem definitely associated with reading difficulty.

The pattern of correlations between academic achievement and visual discomfort are also different for the poor and good groups. For the poor group who suffered significantly more discomfort than the good group the correlation between grade point average and visual discomfort is – .27. For the good group, the correlation is positive .27. Thus for the poor group the higher the discomfort, the lower the grades, but for the good group higher discomfort was associated with higher grades. This suggests a curvilinear relation between discomfort and achievement, an hypothesis which will be explored further in the following section.

These findings suggest a rather complex relationship between academic achievement, visual test scores and visual discomfort. The research has raised the following question and the answer we suggest may offer guidelines for further study: Why is visual discomfort positively associated with reading ability and achievement in the good group and negatively associated with these variables in the poor group?

Our answer asks you to consider the proposition that our eyes are not well designed for long periods of work at near point. If this proposition is correct, in the good student longer periods of reading and studying will result in higher grades but also in more visual discomfort.

Let us further assume that for some students the visual discomfort will become sufficiently intense so as to interfere with reading and academic achievement. The poor group seems to fit this category. Since they show a greater incidence of visual test failures of the kind other researchers have found to be associated with reading disability and lowered academic achievement, it seems not unwarranted to conclude that visual disabilities may be causatively related to academic underachievement.

Conclusions

This research has demonstrated the relationship between academic achievement, visual skills and visual discomfort at the college level.

When freshmen are suddenly faced with the increased reading demands of a college program, visual disabilities and visual discomfort, often present from childhood, can become sufficiently intensified so that academic achievement is impaired.

The findings point to the need for an adequate visual screening program designed to measure visual discomfort and visual skills associated with binocular efficiency as a part of every college reading clinic. A vision screening of this type should be required of all students in academic difficulty. The program should also include mechanisms for referral to vision specialists to insure that visual deficiencies will be corrected. We are currently exploring ways in which such a program could be made available to students at Drew University. At any institution it is going to be an uphill battle to establish programs to deal with problems which should have been handled at the elementary school level.

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SERVICING THE SPECIAL NEEDS OF A GREAT METROPOLITAN SCHOOL SYSTEM

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Education in the United States has had to face up to many problems in recent years. In New York City the problem is complicated by the vastness and the heterogeneity of the population. Into these 850 public schools come children from fifty-eight different language backgrounds and cultures, from the homes of great wealth to those from the ghettos. The perecentage of minority group children in the New York City elementary schools has just become a majority as reported in the most recent census.

In 1950, approximately one child out of every ten in the 14 major cities of the United States was culturally deprived and by 1960 the figure rose to one out of every three. This is due to the large numbers of people moving from the rural communities to the cities. It is estimated that by 1970 the figure may become one deprived child out of every two in the schools of these cities.

The culturally deprived child presents a serious challenge to the educator. First, we recognize that education enables people to develop freedom of thought, to reduce prejudice and bigotry and broaden the horizons of those who cease to be illiterate. Second, these underprivileged children are the children that many teachers find unrewarding to work with and the task of educating them appears unattractive. Staffing such schools can be a great problem. One must recognize that a different approach is necessary.

What is primary in working with the underprivileged child is an understanding of his attitudes toward school and teacher. Such children generally bear strange contradictions regarding school and education. Frequently they have positive attitudes towards education but are very negative towards school and teacher. It is the task of the educator to provide a program in the schools that will change these attitudes. Certainly this is more within the scope of the school person than any efforts that may be expended by the educator to attempt to produce changes in the home, though the home may be contributing towards these negative attitudes.

In order to understand the reading problem and the various measures that have been introduced to seek to resolve this problem, it is necessary to understand the total educational situation and how some of these factors contribute to the reading achievement level of the thousands of culturally disadvantaged children. The reading problem in New York City is similar to the problem that the major cities of our country are facing.

The Major Problems

1. The staff shortages and the tremendous numbers of staff members leaving the city is a great problem. There are about three thousand replacements necessary each year and these are usually in minority group areas.

2. There is a continuous flow of the economically and culturally deprived child coming into the city. These children come from the South, Puerto Rico, Cuba and China. On the other hand, there has been and continues to be a great movement of the middle class families out of the city to suburbia.

3. The high incidence of pupil mobility is an ever present problem in some communities. In some minority group schools, there is a 100% turnover of pupils annually.

4. There is great need for an increase in the number of kindergarten classes and the need for a program of nursery and pre-kindergarten classes in culturally disadvantaged areas. There are at present 100 such classes on a pilot basis.

5. An instrument or technique must be developed to measure the intelligence and learning potential of the culturally disadvantaged.

6. It has been estimated that there are 500,000 adults illiterate in English in New York City at any time, of whom over 42,000 are on welfare.

7. Recent figures reveal that one out of three pupils in New York City is of a culturally deprived background. Such varied ethnic and language backgrounds are found among these children that they present many educational problems.

8. There is a great need for materials of instruction which are appropriate to the learning needs and motivations of pupils of an urban community.

9. There is a continuing need for additional specialists in various curriculum areas: guidance personnel, clinicians, and so forth.

10. There is a need to provide more adequate pre-service and in-service training of teachers and supervisors in the area of reading.

11. There is a need for more research as regards the best instructional procedures for teaching reading to the culturally deprived and retarded reader.

12. The problem of short-time instruction needs to be dealt with. There are over 30,000 pupils in the elementary grades alone, on a four hour day.

13. The problem of budgetary allotments confronts all of us. The per capita allotment per pupil in elementary schools is $700, and the estimated cost to service a pupil adequately exceeds $1000.

How Are These Problems Being Met?

1. Many efforts are being made to help the three, four and five year

old in the socially disadvantaged community. This child must be encouraged to develop concepts and language patterns early. A pilot study is under way in six elementary schools. The curriculum includes a regular nursery program with emphasis on cognitive development. Auditory and visual discrimination, concept formation and language development are being stressed. It is planned to follow these children to ascertain the effect of this porgram on later school achievement. This study is being carried on in cooperation with the Institute for Developmental Studies, Department of Psychiatry, New York Medical College.

Another attempt to provide the most effective program for the four and five year olds is under way through an evaluation design. In this project the teaching techniques and procedures are under study and analysis. There are several studies of this kind being carried on in different parts of the country.

Recent studies have pointed up that the kindergarten day should be five hours rather than two or two and a half. It is planned that attendance at kindergarten will be mandatory rather than optional. At present, this cannot be done because of lack of space. As soon as available space through new construction or movement of pupils to other schools is completed this plan will be put into effect. One of the purposes of the 5-3-4 plan is to provide increased space in the elementary schools.

2. The pre-service training of teachers is being upgraded through television courses in reading, mental health and human relations. Eight thousand teachers enrolled in courses on the teaching of reading on the primary level; six thousand teachers attended a reading course on the intermediate level. Opportunities for observation of instructional practices at the Reading Clinics have been of considerable assistance. In addition, the reading clinic staff members participate in and/or conduct grade or faculty conferences. Reading courses are now required for license in certain areas.

The colleges are working cooperatively with the public schools. The Campus School Program now involves nine colleges working with 31 elementary schools. The Reading Academy is a cooperative endeavor of college personnel and reading specialists of the Board of Education meeting to discuss problems affecting both.

3. There has been an increase in the assignment of special personnel in schools in culturally disadvantaged areas. There are presently 237 teachers of library and this year's budget requests 287 additional positions for the next school year. The teacher of library serves not only as a librarian but also maintains communication with the classroom teacher and seeks to assist in meeting the library needs of the classroom.

The teachers of speech improvement are participating in a cooperative endeavor to upgrade reading instruction through upgrading the general speech level of classes. There is a pilot project being carried on in this endeavor. More teachers of speech improvement will be requested in this year's budget. There are requests for additional corrective reading teachers, reading improvement teachers and specialists in music, science, art and health education.

4. In the school year 1963-64 the program of After-School Study Centers was organized. It was set up to provide additional time and appropriate environment to encourage learning in those communities where such opportunities are lacking because of social conditions. These centers provide a program of reading for children in grades 3, 4, 5, 6. Similarly, assistance is provided in mathematics. There is a library program and a homework assistance program open to all children in grades one to six. An important aspect of this program involves parental cooperation. Parents must enroll their children and account to the teachers for pupil absence.

5. Another program set up to assist the culturally disadvantaged is the summer elementary school service. In the summer of 1964, seven schools were selected to service retarded readers. Originally children who were two years retarded were referred. In addition to the professional staff there were 150 volunteer workers. It is planned that in the summer of 1965 this program will be expanded.

6. The reading clinics which service the emotionally disturbed retarded reader are found in eleven assistant superintendents' districts. This program provides a clinical and an instructional service. It also includes a casework program for parents. This program has shown considerable success and it is planned that this service will be expanded this year.

7. This year a new program known as the More Effective Schools was launched. Ten elementary schools, all of them in culturally disadvantaged areas, were opened. These schools provided the following: a maximum class register of 22, an enlarged staff of specialists, a clinic team, additional school secretaries, additional allotment of supplies of all kinds and, as far as possible, specially selected teachers and supervisors. Next year there will be an increase of ten more such schools bringing the total to twenty More Effective Schools.

8. There is a team at work in cooperation with the Educational Testing Service to develop new types of tests that will seek to obtain a more accurate depiction of the disadvantaged child's learning ability. These new tests will be tried in grade one, and if they prove to be appropriate and useful and more accurate measuring instruments, similar tests will then be developed for the higher grades. It is hoped that other efforts will be made by school systems and researchers to develop new testing materials.

9. New materials of instruction are being developed by several publishers. These are for the city child, with vocabulary and interests geared to his culture. Such materials include multiethnic values, and the schools are in need of these in the areas of social studies, science and health education.

10. There is a considerable increase in research with special emphasis on beginning reading and the disadvantaged child. These studies are con-

cerned with first grade children who are having difficulty understanding the meanings of words and have demonstrated a lack in listening and speaking skills. There are several other studies seeking to learn which are more effective instructional approaches in beginning reading.

11. This year's budget contains a request for an expansion in the school building program. Such an increase in construction of schools will reduce the short time instruction in some areas and will insure, ultimately, a five hour kindergarten program for all children. New buildings will also provide for a more efficient school plant and a more wholesome school climate.

I have sought to outline, briefly, the problems and some practices that have been utilized in meeting or resolving these situations. Studies have shown that education is a more important goal for the culturally deprived than is generally recognized. The reasons for seeking education are different for different people. The motives for education vary from the utilitarian or vocational goals to the respect for the learned. Perhaps it is more difficult for the socially disadvantaged to accept education for its own sake. This goal of self-expression or personal fulfillment is one which, at this point, the culturally deprived cannot share readily.

AN EXPERIMENT IN THE IMPROVEMENT OF COLLEGE READING AND STUDY SKILLS

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College level reading improvement courses are not unusual today. The purpose of these courses is to help students read as effectively as possible so that the reading process will not impair their progress in regular college work. This approach focuses attention primarily upon reading, per se. The emphasis is upon the comprehension and interpretation skills, vocabulary improvement, and rate of reading improvement. The writer's past experiences with such a course at another college have been quite satisfactory as far as the reading improvement was concerned. But, quite often, he has had to conclude that teaching students how to read more effectively did not necessarily mean that they would also read. Therefore, it seemed to the writer that something more than a "reading" course was really needed to assist students. The program which follows emerged from this viewpoint.

The purpose of the study was to develop, initiate and implement a Reading and Study course with the use of content areas specialists and a psychiatrist serving as consultants working with a reading specialist.

The Director of Admissions selected fifty students from the lowest quartile of the 1963 entering freshman class by the use of the verbal section of the College Boards Examination. The verbal scores of these students ranged from 326 to 441. The Cooperative English Reading Comprehension Tests (1A, 1C) were administered to these fifty entering freshman at the beginning and the end of the course in order to arrange an experimental and a control group on a matched-pair basis and to derive final data. The final groups consisted of twenty two members each with the experimental group to receive two hours of instruction weekly. These groups are shown on Table I.

The faculty, known as consultants, was chosen from the various academic departments so that a wide range of reading and study skills could be developed effectively. Dr. Gordon's task was to provide insights into problems dealing with motivation and attitudes in reading and study. Dr. Boies concentrated on the reading and study skills in literature. Dr. Ferren and Professor Horn emphasized reading and study in science and mathematics respectively. The writer, serving as the reading specialist, stressed the general reading skills which could be applied to all reading.

Students purchased the text, **The Meaning in Reading** by J. Hooper Wise, et al (Fifth Ed.). Supplementary materials included **Toward Reading Comprehension** by Julia Sherbourne, "West Point Paragraphs," the **Controlled Reader** for rate improvement, and prepared work sheets based upon college texts in English, science and mathematics.

Dr. Gordon began the course by discussing with the students the dangers inherent in poor study habits. Through examples he illustrated the importance of goal orientation, purpose in college life and attitudes toward achievement. By the question and answer method he also dealt with problems facing the student directly.

After Dr. Gordon's session, the writer taught such general reading skills as paragraph analysis, which included the selection of signal words, key words, main ideas and supporting details. Paragraph and full article patterns, summarizing, outlining, skimming and rate of reading improvement were also stressed.

Dr. Boies devoted his time in the experimental reading course to an approach to the effective reading of literature. Through the use of selected stories, he demonstrated the importance of understanding tone and style of writing as important factors in reading evaluatively. He also showed how the reading for content and literal meaning is rarely sufficient in dealing with worthwhile literature. The two extremes in students' reading, under-reading and over-reading, were illustrated with the use of the stories, "Clay" by James Joyce, "The Guest" by Albert Camus, "A Canary for One" by Ernest Hemingway, and "The Door" by E. B. White.

Both Dr. Ferren and Professor Horn approached reading from the scientist's point of view. They both stressed that the principal difficulties encountered by college students in reading and studying mathematics and science texts, as compared to reading in the humanities, center around the fact that the reading techniques required are diametrically opposite. In science and mathematics, each word, phrase and symbol has an exact and precise meaning. With this viewpoint, both consultants analyzed typical scientific articles with the group.

At the termination of the course twenty two students from the experimental group and twenty students from the control group were retested. Two of the originally selected members from the control group were not available for retesting. The results are shown below:

TABLE I

A Comparison of the Converted Mean Scores Achieved by the Control and Experimental Groups on the Cooperative English Reading Comprehension Test.

Experimental		Control	
Form 1C 9/63	Form 1A 1/64	Form 1C 9/63	Form 1A 1/64
$\overline{X}_1$ - 157.60	$\overline{X}_1$ - 161.65	$\overline{X}_2$ - 157.60	$\overline{X}_2$ - 158.85

z - 1.595*

* Significant at the .055 level, N-20

It should be noted that the mean gains of the two groups were not significant at the 5 percent level when expressed in *z* scores using the one tail test, but they are approaching significance. (A score of 1.645 was needed to establish a significant difference.) The results do indicate, however, that the experimental group has made superior reading score gains when compared to the gains of the control group. It may also be noted that the entire freshman class was given a large-group orientation program on a once a week basis. Thus the control group also received some benefit from guidance.

At the end of the course the enrolled students were asked to evaluate the experimental reading program anonymously. A total of twelve papers was received.

As a final basis for evaluating the Reading and Study program, a comparison was made of the students' grades received at the end of their first term in college and at the end of their freshman year. It was realized that student grades do reflect judgments by different teachers, teaching different subjects, and that they are therefore questionable from a purely statistical point of view. Yet, it is the grades which essentially determine the success of a student in college. It was thus felt that the grades achieved by the experimental group would reflect positively the efforts and the guidance given in the Reading and Study Course – even though the reading test result differences were not startling. Table II contains the findings from these comparisons.

TABLE II

A Comparison of the Mean Grade Indices Achieved by the Control and Experiment Groups during their Freshman Year, Expressed in "t" Scores.

Experimental	Control	"t" Score
1/64 Grade Index $\overline{X}_1$ - 1.80	1/64 Grade Index $\overline{X}_2$ - 1.66	.7108* * Not significant
6/64 Grade Index $\overline{X}_1$ - 1.95	6/64 Grade Index $\overline{X}_2$ - 1.68	1.8468** ** sig. at .035 level
Cumulative First Year Grade Index $\overline{X}_1$ - 1.90	Cumulative First Year Grade Index $\overline{X}_2$ - 1.67	1.6884*** *** sig. at .05 level
N - 22	2.0 equivalent to C average	

Table II points up the finding that the student grades of the experimental and the control group were not significantly different at the end of the first term in college. At the end of the first year in college, however, significant differences are apparent. The experimental group now has a decided advantage. The mean grade index of 1.95 of the experimental group is significantly different from the mean grade index of 1.68 of the control group. The comparison of the cumulative freshman year indices of the respective groups further substantiate the progress of the experimental group. The mean cumulative grade index of 1.90 for the experimental group is significantly different from the cumulative grade index of 1.67 of the control group.

Conclusions

In order to assess the acomplishments of the Reading and Study course in the proper perspective, it should be noted that the selected groups were relatively deficient verbally — as their College Board Scores attest. The reading test gains of the experimental groups, therefore, are encouraging, even though they are not startling. It must be remembered, however, that the emphasis of the course was on the improvement of the more broad and perhaps less obvious reading skills and attitudes which usually cannot be assessed very well from a reading test. The students' comments were generally favorable to the course and the instructors. The reaction that some students would have worked more diligently if they were receiving college credit for the course unfortunately has merit. It would appear that marginal students, even on the college level, do need more positive inducements than merely the promise that their grades will improve with more effective reading and study habits. The other comments seem to reflect the particular needs of the students and how they felt this course fulfilled their needs. The very fact that the students responded in this manner certainly shows a concern with their progress in college. Indifference to the program would have been discouraging.

The follow-up studies of the students' grades support the belief that the Reading and Study improvement course was definitely worthwhile.

The improvement in the grades of the experimental group from January to June of 1964 was encouraging. Thus, it is felt, that the somewhat novel approach of utilizing experts from the various content areas as consultants has definite advantages over the more typical basic reading improvement course offered at many other colleges. First, it brought the freshman into actual contact with some of his future teachers, who in turn, had the opportunity to instill the reading and study skills which they require in their own areas. Secondly, the students were also able to see at the beginning of their college work the subtleties involved in reading literature as well as the preciseness which is needed in reading mathematics and science. It would seem reasonable to assume that this type of training helped them to improve their grades and is also keeping them in college.

With further refinement of the course content and perhaps with the addition of a more specific course enrollment policy, the Reading and Study course can become a vital program for deserving but somewhat academically deficient students.

TUTORIAL PROGRAMS WITHIN THE FRAMEWORK OF EXISTING COLLEGE FACILITIES

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Of all the agencies on a campus, the agency which is in the best position to raise "the academic climate" or to establish "a posture of academic excellence" is a reading-study center.

A reading-study center has much in its favor. It has specific techniques and methods to give to students who seek more effective and efficient ways to master their subjects. Second, it offers help not only to the student who is doing poorly in his academic work, but to the above-average student who seeks to do even better work. Finally, and best of all, all students can seek help at the center informally and unofficially. In a word, a reading-study center can be the bright spot on campus – a place whose only business is to give help.

Though the center has much in its favor – the potential to raise the academic climate of a college or university – it rarely does make an impact. Why? Because it does not reach enough students. Only a small percentage of the students pass through a reading-study center, and often, these students are the ones who are struggling to keep from failing.

If the center is to make a real impact on the college or university community, it must exert an influence on the average, above-average, and superior students. You may well ask at this point: How do you get the superior students into the program? How can you reach more students than come to the center?

Our first experience in reaching out beyond the confines of the reading-study center came by chance, not by design. After helping a fraternity to raise its academic standing among 54 fraternities from a low of fourth from the bottom to a high of seventh from the top through the teaching of four one-hour sessions in study skills, we found ourselves overwhelmed by requests from other fraternities for similar group-tutoring during the following year. Unable to minister to all of the fraternities, a solution and a great opportunity came about in the following way.

We announced to all of the fraternities that the reading-study center would run a training course – a course to train one outstanding student from each fraternity in the skills necessary to become an instructor. When trained, these student-instructors would then return to their respective fraternities where they would teach the study skills course to the membership.

The results of these numerous small-group sessions held within each fraternity were unusually effective. Sufficient numbers of students now studied more vigorously, and an aggressive academic tone was felt by most of the student body. Even some of the faculty members commented on it. Cornell is perhaps unusual in having so many fraternities–54 of them with about 4000 members.

At this point you may well ask: How did you train these student-instructors? Well, it is easier to train such a group than one would at first think. It is easy if you stick to study skills. You simply don't bother with such things as speed reading, vocalization, regression, seeing a group of words in one fixation, and such things which do not have any application to the scholarly process at the college and university levels in the first place.

So, not encumbered with tachistoscopes, perceptoscopes, projectors, accelerators, films, manuals, and workbooks, we were free to emphasize only those skills which really make an academic difference.

The skills taught were as follows: first, how to master the textbook; second, not only on how to take lecture notes, but how to master them as well; third, how to study for quizzes and examinations; fourth, how to write a research paper; and fifth, how to use time efficiently.

All of these skills were taught within four hours of instruction: sessions were one hour duration, thus we met four separate times. During these training sessions, misconceptions were explained, backgrounds filled in, examples given, and "model" lectures presented. All aspects of the instruction were emphasized and put into practice through a series of mimegraphed sheets giving instruction and providing quick practice.

In addition to instruction bearing on skills, we presented incidental instruction on delivery of lectures, blackboard techniques, and uses of practice materials.

After each instructional period, the student-instructors were urged to practice the lecture several times in the privacy of their rooms; then, to present the lectures to the older membership of the fraternity, to gain both further practice and benefit from criticism. The principal target was the new members – the initiates. When the process of lecturing was over, all the members both old and new had been thoroughly instructed.

As mentioned before, the results of this instruction were highly successful. All the fraternities exceeded the academic grade-point averages of the previous year. The surprising bonus-effort of the fraternity program was the improvement in grades made by the student-instructors. Though I don't have records on all the individual student-instructors, of those that I do have, one student-instructor, a third-year engineering student, who already was a good scholar, increased in four of his subjects by 15 grade points, and 10 grade points in his remaining fifth subject.

Though it may seem that we have provided only for the short haul, we have actually done more than the reading-study center itself could do. Notice, we have lodged – embedded – into every fraternity house a full-fledged study skills instructor who is available to all the members almost any time of day or night. He becomes, in fact, the academic chairman for he now has something to give. It is surprising how news of this sort travels. The next thing I knew, I was accused of discriminating against non-fraternity men. After all, some said, 45 per cent of the men on campus live in dormitories. One could not have asked for a better opportunity. You see, the reading center was not forcing itself on the student, the students were asking for our help.

So now we enter the dormitory stage of our group-tutoring story. LetLet me explain the dormitory picture, which, I'm sure is not unlike that of many other colleges and universities.

Most of our dormitories have several floors. On each floor a dormitory counselor (graduate student) lives in. In addition, there is a head counselor for the dormitory as a whole.

During the orientation week early in September, before classes begin, a series of sessions, similar to those presented to the fraterity student-instructors, are given to the assembled dormitory counselors. Again, the reading-study center supplies all of the necessary instructional materials.

Here, too, we have a built-in academic counselor on every floor of every dormitory. In teaching, the dormitory counselors, however, use an approach different from that used by the fraternity student-instructors.

The dormitory counselors give small-group instruction to students on their own floors; then, for example, before the mid-semester examinations as well as before the final examinations, dormitory-wide sessions are held on topics such as "How to Study for an Examination." Of course, directly after the mid-semester grades are announced, sessions on study skills are given on all floors, especially drawing into such sessions students who previously did not attend because they felt that their study skills were good enough; at least, they were good enough in high school.

As far as the reading-study center is concerned, the dormitory instruction, like the fraternity instruction, goes on for the balance of the year without any further involvement by the reading-study center other than supplying packets of mimeographed materials. In both the fraternities and the dormitories the trained student-instructors, who live in, carry on their work as "natural" advisers to students.

Now, it would not be surprising if some directors of college and university reading-study centers interpreted this wide-spread dissemination of study skills as "flooding the market." But, just the opposite situation occurred. The reading-study center, since the initiation of these programs has had more applicants than ever before. It seems that students who achieve some academic success through the application of study skills learned in short dormitory sessions feel that by taking the full course at the reading-study center they will gain even more.

Then, too, many students find out that the reading-study center is not just "another speed reading outfit," so come to gain study skills which make not only sense, but, more important, make an academic difference.

On a college or university campus, a reading-study center has the opportunity not only of helping to establish small "extension centers" for the teaching of reading and study skills by students trained by the reading-study center; but, helping in a supportive role other kinds of tutorial services offered by student organizations. For example, on the Cornell campus there are two organization which tutor students who seek help in a particular subject, and even in a particular course. One tutorial organization is a service project of the Interfraternity Council; the other organization is the honorary society in the College of Engineering.

Both of these student organizations recruit the most capable students on campus as tutors. Incidentally, the competition to become a tutor is keen. Last year no tutor was selected who did not have an academic grade of 97 per cent or better in the subject for which he or she had signed up to teach.

The mechanics of operation for these two organizations are as follows: Notices announcing the tutorial sessions are printed in the daily university newspaper; sign-up sheets are placed in the student union building; students who desire tutoring sign up; groups consist of no more than six students; groups meet in the evening for sessions lasting an hour and one-half; cost to each student is but $1.00; tutors are paid $3.00 per session. The response to this type of help has been overwhelming.

Now, how does the reading-study center fit into this tutoring picture? The presidents and vice-presidents of the tutoring organizations meet with the director of the reading-study center to discuss problems and responsibilities in tutoring, and to arrange for several training sessions for all of the tutors involved.

It is in these training sessions that the reading-study center can do the most good. In these training sessions, the following points are clearly made: first, that the tutor should try to work himself out of his job as quickly as possible by helping the student to become an independent worker; that is, the tutor should not only help the student with the subject at hand, but should show him the study techniques which will help to solve his problems henceforth; second, that the tutor must be aware that a student's non-understanding of a subject may be due to faulty ways of reading the textbook, not taking enough notes on classroom lectures, not knowing how to memorize important facts and data, not knowing how to study for an examination, not knowing how to take an examination, and not knowing how to use time efficiently.

In the training sessions the director of the reading-study center presents techniques and methods for dealing with all of the above problems. Briefly, these tutors of subject matter receive approximately the same training as do the student-instructors who teach a straight-forward short study skills course in the fraternity houses.

It would seem, then, that almost any reading-study center which is willing to expend unselfishly a little time, money, and energy, stands much to gain – certainly the gratitude of many students and perhaps a quiet affirmative nod of the college or university faculty.

PREDISPOSING FACTORS ASSOCIATED WITH POOR READING IN HIGH SCHOOL AND COLLEGE

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Our survey of research studies concerned with factors related to reading success or failure at the high school and college level found these reports conflicting and contradictory. As a result, there has developed the unfortunate tendency of minimizing the importance of physical, emotional, cultural and other factors in identifying, diagnosing and planning instructional programs for retarded readers. It has been pointed out on a number of occasions, for example, that groups of achieving readers contain persons with various kinds of visual defects and certainly groups of disabled readers include far more persons without than with visual handicaps. Hence, by some it has been concluded that such functions can hardly be considered causal and perhaps not even vital as regards reading disabilities.

A number of possible reasons for this conflict in research findings exist. Robinson, Cleland, Kingston, Raygor, and others have noted the small number of adequately planned, controlled and executed studies on high school and college reading. Few studies, for instance, take account of the effect of situational "press," Hawthorne and placebo effects and the problems of adequate conceptual models of the reading process.

The most challenging problem is the definition and meaning of the terms "poor reader," "disabled reader" and the like. Virtually all definitions depend on some degree of discrepancy between potential ability and actual performance. Yet, determining such discrepancy with existing instruments is difficult indeed. Existing intelligence tests have been found wanting in their ability to measure potential "developmental" ability as contrasted to "predicted" ability. Present tests are fairly adequate predictors of a student's probable performance **if nothing special** is done to meet his individual needs. As Kingston, Davis, and others have shown, current reading tests leave much to be desired in their identification and measurement of reading skills. We have discussed elsewhere the problem of appraising the reading process adequately. It may also be noted that all current tests penalize to an unknown extent students from impoverished or culturally different backgrounds.

Admitting the importance of the above problems, the basic consideration in studying reading retardation should be that no single cause or factor can be held solely – or even fundamentally responsible for reading difficulties. The principle of multiple crusation applies here just as in other areas of human behavior. Multiple causation or "overdetermined behavior" involves the hypothesis of **predisposing and precipitating** factors. Predisposing factors may be likened to a store of dynamite or similar explosive. Within a fairly wide range of temperature, humidity and pressure conditions, this explosive substance may be handled, dropped, or even thrown into a flame without detonating.

Precipitating factors may be compared to the several types of detonating devices used to explode the dynamite. Even though the detonator or precipitating factor is set off in juxtaposition to the explosive substance or predisposing factors, an explosion may still fail to take place depending on conditions of pressure, humidity, temperature, age and crystaline structure of the explosive and the efficiency of the detonator. Similarly predisposing and precipitating forces interact, although in a much more complex manner, in producing human behavior. The intensity, duration and type of stress required to precipitate a maladaptive response vary with the quality and quantity of factors predisposing to such behavior which exist in an individual.

Therefore, a constellation of inter-related predisposing factors will always be found underlying cases of reading disability. The precipitating force or forces will vary with the individual personality and his life span. Factors which are predisposing conditions in some individuals or situations may be precipitating forces in other persons or under different situations.

Although predisposing factors affecting reading performance will be discussed separately, in the interest of simplifying the presentation, it should be kept in mind that such forces always interact in complex fashion with each other and with other forces present in the individual's world.

Reading performance is dependent on a number of physical functions, chief among which are visual and auditory factors. Also, research conducted by Smith and associates as well as Bryant has suggested that chemical imbalances in the body are asssociated with some types of severe reading disability. It would appear that these physiological deficiences may be either predisposing or precipitating, depending on their nature, severity and place in the individual's phenomenal world. Other physical factors to be considered are chronic illness, experience at an early age with certain types of immobility, ailments and diseases which are accompanied by high fever, traumatic accidents, and so on. These physical difficulties, all of which may interfere with the efficient performance of the reading process, receive relatively little attention in diagnosis and instructional planning.

For example, with reference to visual functions, many reading programs place heavy reliance on tachistoscopic materials to increase eye span on materials projected for far point reading to increase reading speed. Attempts to improve reading by increasing eye span are not only useless but also may intensify visual strain in the case of certain visual deficiencies to the point where such strain becomes a precipitating force if in the presence of appropriate other predisposing factors.

Inadequate home-family relationships comprise another class of predisposing forces. Children from crowded, extremely low socio-economic environments suffer from deprivation of verbal and cultural stimuli, of satisfying achievement, lack of challenges to master developmental tasks, and anxiety because of differing and often ambivalent home and school expectations. Too much pressure from parents to achieve with or without overexposure to a kaleidoscope of experiences, challenges and tasks makes up the other side of the coin. Other kinds of deficiences in interfamilial relationships, such as broken homes, sibling problems, parental rejection, parental invasion of life-space, are also important predisposing forces.

In regard to educational forces, there are a number of practices in the educational system favoring reading deficiencies. Some of these are inadequate preparation for the work-type reading in content fields characteristic of high school and college levels; lack of training for many in fundamental reading skills; the absence of valid reading instruction in many high schools; the lack of adequately trained reading instructors; stress on grade point average as the indispensable key to further achievement; and educational policies which keep the student in his group and fail to make him a member of his group.

Increasing attention has been given to studying the relationships between reading and emotional status. There has been consistent failure in identifying particular personality traits which differentiate the disabled reader from the achieving reader. In part, this is due to inadequate research design; variations in results because of use of personality measures based on different theories of personality and the difficulty of adequately controlling within-group ability while comparing intra-group variability on a number of factors. In the main, however, the problem has been a tendency to search for causal emotional factors. It seems more probable to us that emotional factors are predisposing factors which are heavily affected by the matrix of relationships among other kinds of individual characteristics, group dynamics, instructional conditions, teacher characteristics, and classroom climate. Evidence at hand suggests that marked divergence of various types between self-concept and ideal-concept will be found to be important predisposing emotional forces as will cognitive set and tendency to see learning in factual or conceptual format. Student expectations of success in relationship to peer expectation, teacher expectation and parental expectation will also influence performance in the presence of appropriate matrices of both precipitating and predisposing factors.

Reading disability should be conceived as the result of a constellation of inhibiting factors varying with different students, different instructional environments, and different time frames. Most of the forces mentioned in this paper may act at different times either as predisposing factors or as precipitating factors. Usually a single factor will become functional in reading disability only in connection with a complex of other factors operating over a period of time.

The student in his reading, as in other forms of behavior, generally perceives and acts in accordance with his needs, goals, defenses and values. Thus, to be effective, reading instruction will have to accept the task of dealing as necessary with the whole phenomenal field of the individual, of planning to bring about changes in his self-perception as well as his perception of his environment. To do this the instructor must identify predisposing forces and precipitating factors as he formulates instruction to bring about the appropriate changes through removing, modifying or strengthening those aspects which appear to be the key to maladaptive behavior.

STATE CERTIFICATION OF READING SPECIALISTS OR WHAT?

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Beaver College

The concept of reading is changing among most of our educators. No longer do they consider reading a simple school subject. No longer do they consider reading a subject to be learned exclusively in the elementary grades. Quite the contrary! Reading is recognized as a complex process. It is recognized as a process which may develop with an individual in his pre-school years and continue into his adult life. With these changed perceptions has come an increased demand for well-qualified reading specialists from a limited supply of recruits. Paralleling this demand a common query among reading professionals and school administrators is, "What action can be taken to assure us that only qualified and effective personnel will be placed in positions to attempt the task of reading specialist?" Their query is real. Their concern is genuine. Shall states issue certificates for reading specialists OR WHAT?

Since there are many varieties of reading specialists, let us examine the uniqueness of each "brand." In its most general sense, a reading specialist is a person who may work directly or indirectly with children and/or teachers and administrators to improve reading instruction. However, if the specialist chances to be identified with titles, such as director of reading, reading supervisor, reading consultant, reading helping teacher, or reading coordinator, the job specification usually reads to be that of working with teachers and administrators in coordinating and in improving a total reading program. The specialist who is known to his staff as a remedial reading teacher most commonly works directly with children who have failed to achieve their reading potential from the reading instruction offered in their classrooms. In some situations the remedial reading teacher may find that his role also is to offer direct and or indirect guidance to classroom teachers of the children with whom she is working. Too, frequently the title of reading helping teacher is given to the person who is assigned the same responsibilities as those of a remedial reading teacher. The reading clinician is usually a specialist assigned to work with children who are severely handicapped in reading. Unfortunately, but true, the teacher who receives a reading certificate or a reading endorsement on his certificate to teach, may find himself in any of the described roles or in the sole role of teaching reading in any classroom to any group at any grade level. Thus, it is understandable when a state certifying agent registers concern and inquires of those interested in seeking reading certification, "For which reading specialist or specalists do you certify?"

Although fifteen states–Connecticut, Delaware, Florida, Georgia, Indiana, Maryland, Minnesota, New Hampshire, New Jersey, New Mexico, Oregon, Pennsylvania, Utah, Wisconsin, and Wyoming—report the issuance of some type of reading certificate or reading endorsement, many other states are studying and pondering the problem, "What is the best course of action for our state's needs?" Too, there are some states which are providing leadership in the preparation of reading specialists, yet which are not certificating the personnel as such. Let me describe how such leadership can be provided by any state. 1. Each teacher education institution within a state can let its interest in developing a program for the preparation of reading specialists be known to the state's certifying agency, indicating the particular specialist and/or specialists it is desirous of preparing. 2. Two lists of guidelines can be followed by the teacher education institutions in designing their program, either the guidelines suggested by the International Reading Association Committee on Professional Standards or by a state-wide Advisory Committee on Reading appointed by the chief school state administrator and guided by a reading specialist at the state level. 3. After the program is adopted by the faculty of a teacher education institution, it can be presented to the reading specialist at the state level who can evaluate and present it to the certifying agency for state approval. The advantage of this plan is that it provides flexibility in programming with each institution retaining its autonomy. The disadvantage of such a pattern is that few states afford adequate personnel to offer leadership in helping to develop, to evaluate, and later to implement such a program for preparing reading specialists.

Though the need for preparing qualified reading specialists is imperative, there is much confusion, discussion, and concern as to which is the best avenue to follow. To states which are planning to actively participate in preparing and certifying specialists, the following guidelines are offered:

1. Remember that the procedures, the details of the machinery necessary to gain approval for certification requirements, will vary from state to state.
2. Encourage State Departments of Education to employ qualified reading specialists at the state level to help with the following:
   a. to assist in selecting at all levels to work as a state-wide committee in setting guidelines for reading specialists. The representatives should be from the public schools, from the institutions educating reading teachers, and from existing professional reading groups in the state.
   b. to interpret the requirements for approval by certifying groups and state groups.
   c. to implement any requirements which are mandated by the state.
3. Suggest that teacher education institutions decide which phase or phases of specialization they wish to emphasize.

4. Bring to the attention of teacher education institutions that some are equipped to prepare reading specialists, while other institutions are not equipped to do so.
5. Recruit and utilize every reading resource person who is willing to devote his time to developing and winning approval of any established requirements. Each state has a wealth of resource reading personnel. It should use them!
7. Allow for flexibility in any guidelines that are established.
8. Encourage the members of each teacher education institution which is interested in preparing reading specialists to "spell out" their concept of reading specialists. Such thinking will be helpful to programming.
9. Provide sufficient time for any program or any requirement to be initiated, implemented, and developed before assessing its worth.
10. Plan frequent evaluations of the effectiveness of any program or any requirements.

Wherever decisions involve numbers of human beings, progress is expected to be slow. The path is expected to be rough. The haul is expected to be long! But, perhaps if all of us who are concerned about the status quo of today's reading specialists become even more concerned fewer teachers will approach us with the query, "Shall I accept this job of reading specialist?"

PAPERBACKS — GOOD READING IN SMALL PACKAGES

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About twenty-five years ago, a well-known wholesaler was shown a new type of merchandise, later to be known as the paperback book. "They're not newspapers, they're not magazines, they're not books—they'll never sell," he snorted. I don't know who the wholesaler was, and the story may be apochryphal, but his dismal prognosis must haunt him today when he is confronted by PAPERBOUND BOOKS IN PRINT, which now lists the astonishing total of more than 30,700 titles available to the literate, semiliterate, and art-loving consumer. A major portion of his business must depend on this mighty mite, this "neat little thing" as Vladimir Nabokov calls it.

And education has welcomed this new medium. Over 300 million books known as paperbacks were sold in 1963, and more than 35 million of these paperbacks were sold to high schools. It is understandable that the major mass-market paperback publishers have established education departments with staffs that work imaginatively and competitively to fulfill the needs of teachers. It is also interesting to notice that a number of publishers whose major efforts in the educational field have heretofore been directed toward hardcover textbooks are now shifting gears and creating paperback series for schools. They have noted, with interest probably, that 75% of the English department chairmen in the recent New York City research project directed by Dr. Joseph Loretan and Dr. J. Wayne Wrightstone through the Bureau of Educational Research favored the use of paperbacks over hardcover texts in high school literature classes in New York City.

How can we account for the appeal of this medium? Why is it that students will read a book in paperback form that they will shun in the hardcover format?

We might consider the thesis of Marshall McLuhan, Director of the Center for Culture and Technology at the University of Toronto and author of a most stimulating book, **UNDERSTANDING MEDIA: THE EXTENSIONS OF MAN.** "The medium is the message," he writes. The "message" of any medium or technology is the change of schale or pace or pattern that it introduces into human affairs. This concept is important to consider, for it would seem that the paperback is changing the pace, that pattern, and the scale of education on every level.

On the college level, the impact of thousands of paperbacks available to the professor of any subject is obvious. The traditional anthology is fading away as the humane instructor realizes that courses can be organized around anthologies of whole works which students of small means can afford. It is the breakthrough that all of us welcome—the depth perspective that was virtually impossible when the blinders of the expensive hardcover textbooks limited our collective vision and choice. The fact that college students purchase their own materials in most cases allows our imaginations to run wild. This also accounts for the rich, rewarding courses that so many private school students are offered—thanks to the paperback.

There is something friendly and elastic about the message that the paperback transmits to students. They can rip them up, put them in their pockets, even put them in their cuffs—draw, doodle, decimate them if they wish—and not feel guilty about the beating they administer to the books. They do not feel obligated to coddle these ephemeral materials while keeping an eye on re-selling them later. It is therefore possible for them to apply their best skills of underlining and marginal notemaking with zest, vigor, and freedom from guilt. Such an attitude even encourages reading the books and studying them.

In public school systems the situation is somewhat different. Students in most secondary schools do not purchase textbooks. Consequently underlining and marginal note-making, the art of carrying on a dialogue with the author through reflective study, cannot be taught through the hard-cover textbooks because the rules forbid it. If the students could own their paperback materials as outright gifts of the books from the school system (a plan suggested by the New York City Study), these skills could flourish.

There are several ways to stimulate reading in secondary schools through the paperback book. Book stores, book fairs, classroom libraries, and book clubs are four popular methods for providing students with paperbacks in the schools.

The book store in the school assumes an ongoing operation. Frequently the student council provides the organizational staff and receives the profits. A faculty advisor supervises the operation. Such a store is an excellent opportunity to offer practical business training to students. One unfortunate error that is common is to view the store primarily as a money-making venture instead of as an educational medium. A faculty advisor in an excellent private school recently said to me, "We don't run the store to make money. I tell the students that they can return any book they buy if it should turn out to be a book they do not like. They get their money back. We are out to encourage wide reading with but a small risk involved." Book stores ordinarily do not make a lot of money for the school, but neither do cafeterias. Providing a varied diet of reading fare is a legitimate goal, and even if the school store should merely break even, the stimulation of reading that it provides makes it a valuable educational activity.

Book fairs are convenient, quick, and effective. Usually they run from three to five days. The wholesaler ordinarily sets up the fair for the school after an advertising campaign has whipped up enthusiasm for the activity. The focus that the medium of the fair places on leisure reading is a means for a fresh emphasis on a pleasurable activity. Something dynamic seems to operate at a fair. Teachers bring students to the fair at assigned times. When a student sees his peers buying books, he tends to follow the crowd. One student said to me recently, "I was looking for a book, but all the copies were gone." I replied that he could probably buy it at the corner drugstore. "Yeah," he said, "but that's not like buying it at the fair." In the fall of this year, Middlesex Junior High School in Darien, Connecticut had a fair at which 700 students bought 1406 books. In February, another fair was scheduled. The advisor felt that fewer books would probably be sold, but he was wrong. 700 students bought 1550 books at the second fair, an average purchase of over two books per student.

Paperback book clubs are another means for creating enthusiasm for reading. The mail-order book clubs organized by Scholastic Magazines have created, over the years, an awareness of the possibilities of the paperback in education, particularly for leisure reading. The teacher usually appoints a capable student to serve as secretary for the club, a monthly descriptive newsletter and order form is distributed, and the books are ordered. Here again from the club, students will often order books that they pass by at the drugstore. This supports McLuhan's thesis, "the medium is the message," for the medium of the book club, or the book fair affects purchasing pattern differently from the medium of the book rack in a drug store.

Libraries in the classroom provide an availability that stimulates student reading. Over the past three years, I have observed the effect of a classroom library on reading behavior. The first year, 117 students (without any exhortation from the teacher), read an average more than 3 books from the library. 75% to 80% of the students had a book checked out of the library at any given time. This pattern has continued since the first year.

It seems that the availability of a library in the classroom encourages the students to read more, even though the regular library may be but a few doors away. Students do appreciate the ease of access and the opportunity to browse daily. Again a dynamic situation is created when they can discuss books with students that they see from day to day. The library in the classroom has an aura of pleasure, for there are no reference books in it. It also has an up-to-date appearance and a image of inviting variety. The message it transmits is one of reading pleasure, but it must be large enough to supply the demand. Fewer than 100 books in a library (about $50.00 worth) would probably be too small a group of books to be effective.

There are other significant trends in the use of paperbacks. Some schools have formed Junior Great Books Clubs. Several companies, such as Scholastic Book Services and Bantam Books, have prepared packaged units of paperback books for sale. There is an increasing trend toward unit teaching organized by the teacher, and journals such as **THE ENGLISH TEACHER** and the **SCHOOL PAPERBACK JOURNAL** frequently publish articles suggesting practical units that are thematic, topical, chronological or organized by genre.

Combining other media with paperback books suggests exciting teaching. Films, plays, and television shows related to paperback reading reinforce the study of a given work and can illustrate the potentials and limitations of various media. Filmstrips and recordings also enrich the study of a given work.

More and more publishers are issuing not only reprints of works but also exciting original paperbacks. Because of the flexibility and vigor of the industry, much experimentation is occurring. Books in ITA, visual books through the offset process, enriched editions, and paperbacks in the programed instruction area are a few examples of the imaginative books that are available.

There is no doubt that the NDEA act will have a favorable effect on the use of paperbacks in education. Many paperbacks will be available for purchase under the act.

In October, 1965, a National Conference on the Use of Paperbacks in Education will be held at Columbia Teachers' College, Columbia University, sponsored by the university, the American Book Publishers Council, and the American Textbook Publishers Institute. A large group of school systems will be invited to send teams of three people from each system to the three day meeting. This conference promises to offer a valuable perspective on the use of paperbacks in the schools.

The paperback sends an attractive message to the educator. It fits many slots in the educational complex. Its value is news to many teachers, but with the emphasis that is being placed on its use and the wide dissemination of information about its promise and potential, the ideal of the well-informed, lifetime reader who loves books may be realized to a greater extent than we now imagine. This desired dream of every teacher of reading may come true partly because of the influence of this medium—the good thing in the small, appealing package.

REACHING OUTWARD WITH PAPERBOUND BOOKS

Frank McLaughlin
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Two recent trends I have observed in efforts to improve English instruction have grown out of the extensive use of paperbound books. The first of these is reflected by English departments that have abandoned the anthology and handbook format in favor of an "open-ended" curriculum that utilizes forty or fifty paperback titles at each level. This approach, which to traditionalists might seem extreme, has grown out of a widespread feeling among English teachers that too many of their students are "vegetating" because of a lack of timely and stimulating material. The paperback-centered English program has been effectively tried by many new high schools; older schools, because of the financial problem involved in shifting from hardbound texts to paperbacks, have more often experimented with paperbacks as supplementary reading material. Although this latter method has proven generally satisfactory, it does not lend itself to significant curriculum reform.

The second trend is partly an outgrowth of the first, and partly the result of the special focus during the past few years on the lower half of the school population. This trend is centered around the use of paperbacks to motivate non-college bound students. There is increasing momentum from perceptive educators to stop feeding general or terminal students with "hand-me-down" reading material from the college-bound programs. Moving away from such inert material as "adapted" classics and abridged or watered-down anthologies, teachers are beginning to seek and find appropriate material that is tailored for their more difficult charges. In their effort to reach the heretofore second class citizens of our schools, many sincere English teachers have been forced to reassess their training and present teaching methods. One of the implications that has grown out of their concern is the realization that they cannot rely on their college preparation to teach these youngsters. They must make a conscious effort to place their cultivated literary taste behind the more important considerations of student interests and needs. This generally means that books like Ivanhoe, David Copperfield, and Jane Eyre give way to titles like Lilies of the Field, Hot Rod, and The Bridges at Toko-Ri. Both of these related trends carry implications that I would like to explore with you during the next few minutes.

Opening your curriculum by having between two hundred and four hundred paperbacks available for your students might seem like an expansive gesture that will cure the ills of a tired English program. It could prove more disastrous than helpful. If paperbacks are brought into a program en masse, they must be accompanied by considerable preparation time. Time must be allotted for chairman and teachers to select titles and develop units around books that will form the core of their various courses. A new teacher is likely to flounder in a situation where a wide latitude is provided by a great number of paperbacks. A frighteningly free atmosphere can be created that is akin to chaos. Besides the upsetting problem of bookkeeping that can distrub even an experienced teacher, the newer member will find the storing, dispensing, collecting, and switching of hundreds of books a headache. He undoubtedly will be worried enough about how he is to integrate skills into this broad literature base and will be worrying about more basic things such as how many and what length writing assignment should be given. Unless paperbacks are integrated into a well planned program that knows where it is going, they can become just one more vehicle for directionless mediocrity.

I mention these drawbacks not to disparage the present evolution to paperback-centered curriculums, but to alert teachers to the realization that paperbacks bring their own special problems. To unimaginative teachers paperbacks might seem a handicap since they force him to prepare his own material and assume more responsibility in organizing the sequence of his year's work. To the resourceful teacher who has been given time to develop his course of study, paperbacks are the tools that can enable him to reach the greatest number of his students. In well-organized paperback-centered programs, there is much encouraging progress to be reported.

With paperbacks as the primary tools, reading becomes the base of the curriculum and all writing, vocabulary and grammar drillwork can flow functionally from this base. Comprehensive units can be planned around important ideas, themes, and practical problems that are presented in the reading. These units can embrace all related language skills to varying degrees. Combining the ingenuity of the teacher within the limits of available material at his grade level, this "organic" approach negates artificial compartmentalization. Teachers no longer need to hop-scotch back and forth between grammar, composition, and literature with occasional side-stops for work on vocabulary and spelling lists. Students can better understand how skills fit into their overall English programs, when they are naturally integrated. Book reports at periodic intervals and composition topics that are unrelated to the mainstream of classwork are two more sterile practices that can be eliminated. Since paperbacks can provide a steady stream of important ideas and issues to be examined, there should be no excuse for poorly conceived and administered outside reading assignments or for inane theme topics. Dependence upon paperbacks means that students must read to pass their courses. It remains for good book selection to insure classrooms becoming the healthy forums for ideas they should be.

Wide use of paperbacks also provides an impetus for the elimination of artificial course breakdowns. For example, the comfortable and workable format of having World literature one year, British literature another and American literature the next has long been practiced by a great number of high schools. This system is meaningless to students without college aspirations or ability. Generally, these students are in need of intensive work on basic communication skills, and literature chosen for them should be in line with getting them to read and enjoy it, rather than in learning how certain books fit into certain movements in a particular nation's literary history. Thus, the very presence of paperbacks encourages a teacher's ingenuity in finding creative ways to plan his material. There is little doubt that paperbacks have been indirectly responsible for spurring curriculum reforms.

Perhaps the greatest contribution that paperbacks have made is in helping to create a fresh climate for the teaching of non-college bound youngsters. Teachers have finally awakened to why many students are alienated from literature. Charles G. Spiegler has aptly told us why:

> It isn't that Johnny doesn't read because he can't. Rather, Johnny can't read (as well as he should, because he doesn't! And he doesn't because he finds it a bore! Give him a title, a book jacket that rings true. Let the world and its infinite wonders be the subjects he may choose from. Appeal to his interests – and Johnny reads.[1]

As soon as teachers begin to think of what will best reach these students, rather than how they will modify their college-prep material to somehow hold their attention, the stage is set for a breakthrough with general students. Once teachers stop looking at these others as recipients of their second effort and preparation, the renaissance has begun. The next step is looking for titles that will engage student interest.

One constant cry that is gradually dying out now is the lament that there just aren't books available that combine simple vocabulary and sentence structure with mature content. Several publishing companies have begun developing lines for this difficult-to-reach segment of our school population.[2] This pace can be accelerated by having teachers speak up about their needs, read more themselves, and begin conversing with publishers about books that would make good paperbacks.

Among the titles that have recently come to my attention are a number that have proven especially effective in engaging student interest. Louisa Shotwell's moving account of a young Negro boy's quest for a permanent home and a real education is one. This well-conceived short novel, **Roosevelt Grady**, is an excellent vehicle for developing social conscience or reflecting the plight of the migrant worker. It is a good book for a slow seventh or eighth grade English class. **Lilies of the Field,** William Barrett's novellette that won fame as a motion picture, is another contemporary story that has been successfully taught at the ninth and tenth grade levels. For juniors and seniors who are difficult to reach, the following lesser known books might be tried: **When the Legends Die** by Hal Borland, **Run Silent, Run Deep** by Commander Edward L. Beach, **The Raft** by Robert Trumbull and **The Cross and the Switchblade** by Rev. David Wilkerson with John and Elizabeth Sherill.

Fortunately, there are a number of excellent writers, spanning a variety of interests, who excel at this special kind of literature. Among the rapidly increasing number of competent professionals who could be recommended are John Hersey, Herbert Sim, Jack Schaefer, Henry Gregor Felson, Anne White, William Campbell Gault, Howard Pyle, Conrad Richter, and John Tunis.

One of the biggest problems facing teachers is the screening of the tremendous variety of material that is fast becoming available. There is a pressing need to catalog, evaluate, and generally report on new products, whether they be books or audio-visual aids. Teachers are literally swamped with circulars and pamphlet propaganda praising the merits of each new product. It is imperative that someone aid the teacher, who has over one hundred and twenty-five students and five classes each day, to learn what is best from this welter of instructional material. New teachers and those furthering their educations part time could be helped by college instructors who have kept abreast of current trends.

Equally important is the necessity for colleges to train teachers more realistically and to develop curriculum specialists who can impartially aid in the evaluation of material. We need courses that will prepare future teachers to handle general classes proficiently. Courses that deal with methods and materials should focus considerable attention on helping teachers develop sound attitudes and techniques that will bring about the successful teaching of non-college bound students. In teacher-training institutions there must be a reassessment that will automatically bring about a closer liason between what is being done in the high school classroom and what is being offered in college English and Reading courses.

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1. Charles G. Spiegler, "Paperbacks for Reluctant Readers" (a Scholastic Book Services pamphlet), p. 1-R
2. "The most significant series in this area are the Berkley Highland Books, Grosset & Dunlap's Tempo series, Ballantine's war stories and science fiction, Dell's Laurel Juniors, Bantam's Pathfinders, Washington Square's Reader-Enrichment series and Signet Classics. Also, Universal's Nova Books, Pyramid's Willow series, The J. Lowell Pratt Sports Library." This is quoted from Robert Beauchamp's article, "Bridging the Gap" in School Paperback Journal (November, 1964) p. 8. This article perceptively recommends a "transitional literature" to bridge the gap between basal reading and literature in the high school.

READING AND CREATIVITY

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"Readin' rots the mind," said Tim McGrath when he saw the overflowing library being moved into the new folks' house, in that childhood classic, RABBIT HILL. Is it heresy to suggest, in this assemblage of august minds and highly literate souls, that Tim was right in his observation? Mayhap it is heresy, but heresy has assisted in the birth of new ideas, indeed of whole revolutions. Tim McGrath admired "doers," and as he saw this matter, readers just sat still. Perhaps he had a point, for he may have known only receptive readers, those who want a genteel way to pass the time. In this case, I would have to agree with Tim. "Ecape reading" is a fine and therapeutic experience in small doses. In large doses, however, the kind of reading that merely passes the time away can be poor fare for mental health. In an age when great things are expected of the acquisition of literacy, it is important to look critically at the differing roles of reading and I am glad that today we have the chance to examine one of them.

Creative Responses To Reading

In a recent issue of the JOURNAL OF READING in the section devoted to News and Notes, the authors differentiate among receptive reading, critical reading, and creative reading. [1] They then split creative reading into divergent creative reading and convergent creative reading.

Rather than discuss the pro's and con's of convergent and divergent thinking vis-a-vis creativity, I prefer today to wrestle with other facets of the reading process. I propose that we look at some of the activities frequently cited as instances of creative reading and ask two questions: Is it the reading that is creative or is it some other process that is the creative element? What kinds of activities are so inescapably intermeshed with the reading act as to be honestly termed creative reading?

Now, creativity is a fine thing and I'm sure we are all for it as we're all for virtue and against sin. Creativity is even a fashionable thing now as never before on the tongues of journalists, politicans, industrialists as well as teachers and psychologists. Is reading, essentially a process of intake and perception, creative? Teaching guides frequently suggest many activities to stimulate creativity: 1. have the pupils write a different ending for a story they have enjoyed; 2. apply an author's idea to a new area or to an era years before or after that depicted in the reading; 3. write a rebuttal or letter of appreciation to the author; 4. draw or paint a picture suggested by an episode in a tale of adventure; 5. (and this one makes me shudder) write a poem changing a line or two or finish an incomplete stanza.

I submit that these and similar activities call for emotional and intellectual responses to reading. Except for the re-writing of someone else's verse, I would agree that these activities have value for the student, helping to incorporate him, as it were, into the author's way of thinking about and seeing his world or, at times, finding the cracks and gaps in that world and "shoring up" those weakened structures with their own thinking. Reading may be the springboard; the assigned activity comes after the reading and involves thought, imagination, and production of words on paper, or dramatic action, or graphic presentation thru paint or sculpture. These same kinds of expression can be engendered by listening to tapes or records, by seeing a play live or on film, by visiting a congressional session, or other locale where problem solving is going on. They are valuable, but they are not unique to reading.

What traits do these activities use and develop? At least three seem to be essential: reflectiveness, curiosity, and inventiveness. Perhaps Benjamin Franklin with his kite string and key still remains the arch example of the curious investigator, the reflective thinker, the inventor. Our pioneer society has long venerated this combination. The Founding Fathers, for the most part, demonstrated these traits in superb combinations of arts and skills for which all mankind is still indebted. They are qualities needed by our society here and now and needed, too, by individuals for fulfillment as contributors to life. There are many ways that reading can contribute to curiosity: What don't we know about the Industrial Revolution, or about the Alabama boycott from reading a series of articles might be more important than quizzing students about the bread-and-butter content of even a fact filled, thoughtful discourse.

Ever since Sputnik we have intensified our evaluation of these virtues. But long before 1960, at least a few reflective souls were as sure as the man in the street is today that we must create or perish. Lewis Mumford writing in the New Yorker opined that man flew and communicated instantly in myth and dream long before anyone accomplished these feats in hardware.[2]

Creativity In The Act Of Reading

Let us turn now to some processes of creativity that go on more nearly within the act of reading. In a very general sense the decoding of printed symbols into spoken words and clothing those sequences of symbols into meaning is creativity of a sort. The reader retrieves and selects from the many associations stored in his memory. Cybernetics may have much more to tell us about this process in the years ahead and even now we respect its intricacy.

There is yet another process simultaneous with the above, indeed, perhaps the matrix of the meaning-association that goes on in any intelligent reading. I refer to the silent hearing, the listening with the inner ear that is indispensable to making up the appropriate meanings as we go along. We scarcely know we do it until a passage evades us, and we stop to read aloud to pattern the words so that they make sense. Headlines often make us do this. So does verse, and fortunate is the person who hears the music and rhythm of Frost's **Birches** or Poe's **Bells** as he sees the printed words. If we have enough of the right kinds of experiences, we can hear these qualities without a sound being made. Reading aloud intensifies the aesthetic delight and, I, for one, am sure we need much more of this pleasure in our high school and college classes as well as in our elementray schools. Indeed, I suspect that without a considerable amount of dramatic or projective oral reading, we do not develop the sophisticated skills of hearing when we read silently.

If hearing with the mind is part of the creative process, so too is seeing with the inner eye. Wordsworth no doubt immortalized not only daffodils but also the "inner eye that is the bliss of solitude" for all of us.

Still another process beyond the inner hearing and seeing is the well-nigh miraculous one of identification with characters as one reads, not after, and in the very process of discovering them on paper. Indeed, the activity seems as much self-discovery as literary discovery. Kindergarten children have cried when brave Charlotte in E. B. White's classic finally gave up her life. And adults, too, have confessed to the same sense of loss, even though tempered by the wisdom of inevitability and of vicarious continuity. I suggest that we have many things yet to learn about the process of identification in reading at different ages with relation to different emotional capacities and with respect to comprehension.

One additional activity the mind and emotions carry on as one reads has to do with creating a mood to match that in which the author has cast his characters. Whether elation or dispair, defeat or courage, confusion or serenity, the reader must make for himself this special world in which the characters and he, the reader, are living together for a time.

These processes go on during reading. To the extent that they do, in the reading of fiction and verse, the very act of reading seems to me to be creative. They linger on into the after-reading glow, the reflectiveness, the re-living of episode, the re-telling to a willing hearer, but they also act while reading, and hence are different from the kinds of responses referred to earlier.

Teaching To Enhance Creativity

If we assume that creativity, whether during or after the fact, is a good thing, how can we foster it in our teaching? The first answer is the commonplace but inescapable one of building respect for the individual, including those personalities that do not run true to expectancy, that may, as Edgar Dale suggests, be elliptical rather than well rounded.[3] Respect for the pupil as an author is part of this view. If only established authors' works are preserved and the students' papers merely corrected, graded, and returned or worse still, lost, how can the young writer feel? His writing is of no account; the printed book is valued not only for content but as a financial investment. Informal publication, preserving some samples of every young writer's work, gains respect for the written word in general and for so many dimensious of learning about clear, vivid expression, of learning about form and structure, that one wonders why comparatively little of this is done in elementary school, and less and less as students go on to high school and college.

Respect for individuality carries some additional obligations, some of which were clarified for me by Dr. Fugits of the University of Hawaii.[4] Conformity to modern stereotypes, said Dr. Fugita, demands a kind of sex-identification that he feels is unsound and stultifying. He says that in our culture, sensitivity is assigned to the feminine role, autonomy to the masculine. It is respectable for the female to be moved by beauty, sadness, the feelings and needs of people; the male shows strength by not being sensitive to beauty or to moods and by acting in response to his own needs and feelings. Dr. Fugita points out that this separation is culture-induced, that sensitivity and autonomy, both external and internal orientation, are indigenous to men and women and that both are necessities for the creative life.

A further note of respect for the individual as a way of enhancing creativity was recently sounded for me by Dr. Dale's observation that "the creative person has learned how to fail successfully."[5] When we can see failure of one project as the open sesame to a new venture, the closing of one door as a normal process of narrowing the field to find one's true strength, we shall have made many kinds of success more nearly possible.

I know of few concepts more needed in education today.

In today's high-pressured curricula, we forget that individuals must have time as well as libraries in their schools. They must make choices in reading. I am aghast at the number of adolescents who tell me that they have time only for assigned reading, that much of it they enjoy and would want to read anyhow, but that time to "just read" because they want to is left out of our present acclaim for excellence. And this pressure comes at the very time when adult patterns are being crystallized. It sometimes appears that our educational program is much more akin to stuffing a Strassburg goose than to the much touted method of insight and discovery!

Further, I propose that we put into action more of the insights of those psychologists who tell us that creativeness is characterized by playfulness of the mind; that the creative person remains open to his own experience, that the creative pupil is often not liked by his teacher and knows it, that the high IQ and the highly creative individual are not necessarily identical.[6]

If we can keep our perspective clear, I believe that we shall see all along the line that creativity in reading is nurtured by all those kinds of expression that make a person whole. Stimulating curiosity about many things, prizing invention in steel or stone, in characters and incident; fostering reflectiveness about a painting or a symphony, or about landing men on the moon strengthens the very attributes needed to respond creatively both during and after the act of reading.

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